

MONTHLY WEATHER REVIEW.

VOL. XX.

WASHINGTON, D. C., FEBRUARY, 1892.

No. 2.

BOARD OF EDITORS { Mr. Horace E. Smith, Chief Clerk of Weather Bureau,
Professors Henry A. Hazen, Thomas Russell, and Charles F. Marvin, and
Mr. Edward B. Garriott, in charge of Review Room.

INTRODUCTION.

This REVIEW is based on reports for February, 1892, from 2,713 regular and voluntary observers. These reports are classified as follows: 158 reports from Weather Bureau stations; 107 reports from United States Army post surgeons; 1,774 monthly reports from state weather service and voluntary observers; 30 reports from Canadian stations; 218 reports through the Cen-

tral Pacific Railway Company; 426 marine reports through the co-operation of the Hydrographic Office, Navy Department; marine reports through the "New York Herald Weather Service;" monthly reports from local weather services established in all states and territories, except Idaho, and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR FEBRUARY, 1892.

The month was warmer than usual, except in the Atlantic coast states south of the 40th parallel. The greatest departure above the normal temperature was reported over the northern plateau region and on the northeast slope of the Rocky Mountains, where it was 5° to 10°, and the most marked departure below the normal temperature was noted on the North Carolina coast, where it was more than 2°. The highest temperature reported by a regular station of the Weather Bureau was 89°, at Brownsville, Tex., on the 11th, and the lowest was -33°, at Saint Vincent, Minn., on the 15th. The principal cold wave of the month advanced from the Northwest to the Atlantic coast from the 13th to 16th. Frost occurred generally over the Florida Peninsula as far south as Jupiter on the 13th. In the Gulf States and Texas frost was not reported south of the 30th parallel.

PRECIPITATION.

The monthly precipitation was generally deficient. On the north Pacific and middle Gulf coasts the amount of rainfall was 4 to 5 inches less than the February average, and in western Oregon, western Washington, over a great part of the Gulf States, Tennessee, and the Florida Peninsula, and along the Atlantic coast north of the 40th parallel the deficiency was more than 2 inches. The monthly precipitation was in excess from southern California and the southern plateau region to the lower Missouri valley, over parts of the Lake region and extreme north-central valleys, and at stations on the Virginia and North Carolina coasts. The greatest excess was noted at Hatteras, N. C., and Leavenworth, Kans., where it was more than 2 inches. At stations in eastern Texas, central Missouri, southeastern Kansas, and western

Colorado the monthly precipitation was the greatest, and on the middle Gulf coast, in northern Arkansas, and at Bandon, Oregon, and Tatoosh Island, Wash., it was the least ever reported for February. An unusual depth of snow was reported in the Adirondack Mountains, New York. In nearly all parts of Iowa the snowfall was insufficient to protect crops, and wheat and other grains were injured. Heavy snow fell in central Arizona and northern New Mexico the early part of the month. A heavy fall of snow occurred generally over New York and New England on the 11th and 12th.

STORMS.

Northerly gales prevailed along the middle Atlantic and North Carolina coasts on the 5th. On the 6th destructive thunderstorms occurred in Missouri and Arkansas. A local storm damaged property to the extent of about \$2,500 in Wood county, Ohio, on the 7th. Gales attended a heavy snow and rain storm over the middle Atlantic and New England states during the 11th and 12th. During a thunderstorm at Palestine, Tex., on the 19th damage was caused by heavy rain.

RIVERS.

Ice in the Saint Clair River broke up the early part of the month. An unusually heavy ice gorge in the Allegheny River at Red Bank broke on the 20th. A channel opened in the ice in the Mississippi River at La Crosse, Wis., on the 26th. At Davenport, Iowa, ice ran out on the 4th. The Missouri River continued frozen at Pierre, S. Dak.

AUORAS.

Unusually brilliant auroral displays over an exceptionally large region of visibility occurred on the 13th.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for February, 1892, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

In February the mean pressure is usually highest over the middle plateau region, where it rises above 30.20 about the Great Salt Lake region in Utah. In districts east of the Mississippi and south of the Ohio rivers it is generally above

30.15. The normal pressure for February is lowest over Newfoundland, where it is below 29.90, and it is below 30.00 over the Gulf of Saint Lawrence, eastern Nova Scotia, and on the Pacific coast north of Washington. There is usually a decrease of mean pressure over the interior and southern districts, and an increase of pressure in the northeast and northwest districts and over the British Possessions.

The distribution of mean pressure in February, 1892, was

peculiar. The pressure was highest from eastern Manitoba over the north Lake Superior region, where it was above 30.20. It was above 30.15 from the central part of the middle plateau region over the middle Missouri valley and the north part of the Lake region, and from the Saint Lawrence Valley southward over the interior of the Atlantic and east Gulf states. The mean pressure was lowest in the lower Colorado valley, where it was below 30.00, and it was below 30.05 on the extreme north Pacific coast, along the middle and south Pacific coasts, over the west and south parts of the southern plateau region, and over eastern Nova Scotia.

The abnormally high pressure over the extreme north-central districts marks the path of six of the ten high pressure areas traced for the month, and five of the nine low areas traced traversed the northeast slope of the Rocky Mountains, where the departure below the normal pressure was most marked.

A comparison of the pressure chart for February, 1892, with that of the preceding month shows a general decrease of pressure, except east of a line traced from the Saskatchewan Valley to the south Atlantic coast. The most marked decrease of pressure occurred over the middle and northern plateau regions, where it was more than .15, and the greatest increase was noted from the eastern Lake Superior region to the middle Saint Lawrence valley, where the mean pressure was more than .15 higher than for January, 1892.

On the Washington coast, and from Manitoba, the Dakotas, and the middle Missouri valley to the Atlantic coast north of the 37th parallel the mean pressure was above the normal; elsewhere it was generally below the normal. The greatest excess in mean pressure was noted over eastern New England and the middle and lower Saint Lawrence valley, and on the extreme north Pacific coast, where it exceeded .10, and the most marked departure below the normal pressure was shown on the northeast slope of the Rocky Mountains, where it was .07 to .13. On the middle and south Pacific coasts and over the south part of the southern plateau region the departure below the normal pressure was more than .05.

HIGH AND LOW AREAS.

The paths of areas of high and low pressure over the United States and Canada during February, 1892, are shown on Charts IV and I, respectively, and some of the prominent characteristics of the areas are given in the table at the end of this chapter.

HIGH AREAS.

Ten high areas appeared, the average number traced for February during the last 17 years being 8. Of the high areas traced 6 appeared in the British Northwest Territory, one off the north Pacific coast, and 3 over the plateau region north of the 40th parallel. The high area that appeared on the north Pacific coast moved southeastward to Colorado, thence northeastward to Lake Superior, and thence to Nova Scotia. The general direction of movement of the high areas was east-south-east, and the average velocity was 27 miles per hour. The highest pressure reported for the month was 31.08, at Father Point, Quebec, at the morning report of the 27th. The following is a description of the high areas traced:

I.—At the opening of the month high area X traced for January occupied the south Atlantic states, low area XI for January was central south of Newfoundland, low area I, a continuation of low area XIII for January, was central over Iowa, and the pressure was high and rising over the northern plateau region and on the northeast slope of the Rocky Mountains. The pressure continued to rise over the middle and northern plateau region and on the eastern slope of the Rocky Mountains until the morning of the 2d, when high area I was central over Kansas, with pressure above 30.30. On this date the temperature fell 10° to 20° from Texas to the Lake region. During the 3d the high area advanced east of the Mississippi River, with pressure above 30.30 in Kentucky and Tennessee, and a temperature fall of 10° to 20° in the Ohio and middle

Mississippi valleys. On the 4th the center passed off the south Atlantic coast, with a temperature fall of 10° to 16° from eastern Tennessee to the Maryland and Virginia coasts.

II.—The morning of the 2d, when high area I was central over Kansas, this high area occupied eastern Washington and eastern Oregon, where the 12-hour increase of pressure was .14 to .16, and pressure above 30.40 was reported. By the morning report of the 3d the area was central over Wyoming, and the temperature had fallen 14° to 18° from western Colorado to eastern Montana. On the 4th the center advanced to the valley of the Red River of the North, with pressure above 30.20, and moved thence to the west lower lake region by the evening of the 5th, with pressure above 30.30. On the 5th the temperature fell 10° to 20° from the southeast slope of the Rocky Mountains over the Lake region, and the 12-hour increase of pressure was .20 to .30 in the Ohio Valley. Moving southeast the area passed off the middle Atlantic coast on the 6th, with pressure above 30.40, temperature below freezing to South Carolina, and the lowest temperature of the month at Albany, N. Y., Washington, D. C., and Lynchburgh, Va., where the minimum was 0°, 6°, and 16°, respectively.

III.—Appeared north of North Dakota the morning of the 6th, with pressure above 30.30. The temperature had fallen 10° to 20° in 24 hours in that region, the line of freezing weather extended to southern New Mexico and western Texas, and the 12-hour decrease of pressure was .20 to .30 in the east Saskatchewan valley and Manitoba. During the 7th this high area disappeared by an increase of pressure north of the Lake region.

IV.—Appeared over Alberta the morning of the 8th, with pressure above 30.30, a 12-hour increase of pressure of more than .30. A 24-hour temperature fall of more than 20° was noted north of Montana, and freezing weather occurred to extreme western Texas. During the 9th the center advanced to the lower Missouri valley and thence to the middle Ohio valley, with pressure falling below 30.20, and freezing weather north of a line traced from central Texas to New York. The morning of the 10th this area occupied the middle Atlantic states, with pressure below 30.20, and passed thence eastward, with slight pressure and temperature changes, and freezing weather to southern Virginia.

V.—Appeared north of Montana the morning of the 11th, with pressure above 30.30. A 12-hour increase of pressure of more than .30 occurred in Assiniboia, a 24-hour temperature fall of 10° to 30° was reported in the Red River of the North and middle and lower Missouri valleys, and freezing weather occurred to the southeast slope of the Rocky Mountains and the Ohio River. During the 12th the area was central north of Lake Superior, with pressure above 30.20. The temperature fell 20° to 30° in the Lake region and Ohio Valley, and freezing weather was noted in the Atlantic coast states to northern South Carolina and northern Georgia. During the 13th and early part of the 14th the area was ill defined, but apparently passed southeastward over New York and disappeared off the south New England coast.

VI.—An area of high pressure extended from the Oregon and northern California coasts over the middle plateau region from the 8th to 11th. The morning of the 12th this area had apparently divided, one part remaining over the middle plateau region, and the other occupying Texas, where the pressure was above 30.30. Moving eastward over the north part of the Gulf of Mexico, with pressure above 30.20, the area disappeared east of Florida during the 13th. The passage of this high area was attended by the lowest temperature of the month in the Gulf and south Atlantic states, freezing temperature being reported as far south as Meridian, Miss., and Savannah, Ga., on the 13th.

VII.—This high area was attended by one of the principal cold waves of the month in central and northern districts. Its approach was shown by reports of the 13th, and the morning of the 14th it was central north of Montana, with pressure above 30.40. During the 13th there was a rapid decrease of

pressure in the Northwest, the temperature fell 30° to 50° over and north of eastern Montana, and the line of freezing weather extended to northern Kansas. During the 14th the center advanced to North Dakota. An increase of pressure of more than .50 in 12 hours was noted in the middle Mississippi valley, the temperature fell 20° to 30° in 24 hours in the middle and northern central valleys, a minimum reading of -24° was recorded at Fort Buford, N. Dak., and the line of freezing weather extended to extreme northern Texas and the Ohio Valley.

Moving slowly south of east the center reached the extreme upper Mississippi valley on the 15th, with pressure above 30.60. In the lower lake region the 24-hour increase of pressure was more than 1.00, the temperature fell 20° to 30° from the middle Mississippi valley to the lower lake region, the line of freezing weather extended from central Texas to the New England coast, and the lowest temperature of the month occurred in the middle and upper Mississippi, middle and lower Missouri, and the Red River of the North valleys, a reading of -33° being noted at Saint Vincent, Minn. On the 16th the center reached Ohio, with pressure above 30.70. The temperature fell 10° to 20° in the Atlantic coast states, and more than 40° in eastern Ontario, the line of freezing weather extended to Tennessee and southern Virginia, and the lowest temperature of the month was noted at a number of stations in the Lake region. During the 17th the center reached eastern Virginia, with a decrease of central pressure, the temperature was below freezing to Augusta, Ga., and the lowest temperature of the month occurred at stations in New England, a minimum of -19° being noted at Northfield, Vt. During the 18th the area settled southward to the south Atlantic coast and passed thence to sea during the 19th, its movement after the 17th being unattended by noteworthy features.

VIII.—Appeared over Alberta the morning of the 16th, with pressure above 30.50, and by the evening of that date had advanced to western Saskatchewan. The 12-hour increase of pressure was more than .30, and the temperature fell more than 30° in the upper Saskatchewan valley during the 16th. On the 17th the center advanced to Manitoba, with pressure above 30.60, the pressure increase was .20 to .30 in 12 hours in the middle Missouri and Red River of the North valleys, the 24-hour temperature fall was more than 30° in the lower valley of the Red River of the North and eastern Montana, and the line of freezing weather extended to southwestern Kansas and central New Mexico. During the 18th the area was central north of Lake Superior, with pressure above 30.60, the temperature fell 20° to 30° from Kansas to the north-central Lake region, and the line of freezing weather extended to southern Kansas and central Missouri. On the 19th the area advanced to New England, with pressure below 30.40, and moved thence over the Gulf of Saint Lawrence, where the pressure continued high until the 25th.

IX.—This was the only high area traced across the continent during the month. It appeared on the north Pacific coast on the 22d, with pressure above 30.30, and a 12-hour increase of pressure of more than .40 was shown on the Washington coast. During the 23d the center advanced to the east part of the middle plateau region, with pressure above 30.40. On this date the temperature fell 8° to 14° over the middle and northern plateau regions, and the minimum temperature fell below freezing over the middle plateau region and on the middle-eastern slope of the Rocky Mountains. On the 24th the center moved to the middle-eastern slope of the Rocky Mountains, with pressure above 30.50, there was an increase of pressure of .20 to .30 from Manitoba to Texas, and the line of freezing weather extended from west-central Texas to Lake Superior.

During the 25th the center advanced to the lower Missouri valley, with pressure falling below 30.40. On the 26th the center shifted position to the region north of the Great Lakes, where the pressure rose above 30.90. On the north shore of Lake Superior the 12-hour increase of pressure was more than

.70, and the 24-hour temperature fall exceeded 30°. During the 27th the area moved to the lower Saint Lawrence valley, with pressure above 31.00, a reading of 31.08 being noted at Father Point, Quebec, at the morning report, an increase of 1.02 in 24 hours. The temperature fell 20° to 30° in New England and the Canadian Maritime Provinces, and a fall of 48° was reported at Father Point. On the 28th the area settled southward over the Gulf of Saint Lawrence, with a decrease of central pressure, and the pressure continued high in the region about Nova Scotia until the close of the month.

X and Xa.—Appeared north of eastern Montana on the 27th, with pressure above 30.40, and at the evening report Xa occupied the northeast part of the middle plateau region, with pressure about 30.30. On this date the increase of pressure was .20 to .40 from the middle plateau region to North Dakota, the temperature fell more than 20° in the Dakotas, and the line of freezing weather extended to southern Nebraska. By the night of the 28th the high areas apparently united and formed an area of high pressure which occupied Manitoba and North Dakota, with pressure about 30.50. On this date the pressure increase was .30 to .40 from the southeast slope of the Rocky Mountains to Manitoba, the temperature fell 20° to 30° in the valley of the Red River of the North, 20° at Omaha, Nebr., and the line of freezing weather extended from west-central Texas to southern Wisconsin. At the evening report of the 29th the area was central north of Lake Superior, with pressure above 30.60. The pressure increased .20 to .40 over the extreme upper Mississippi valley and the upper lake region, the temperature fell 10° to 20° over Lake Superior, and the line of freezing weather extended from northern Texas to northern Lower Michigan.

LOW AREAS.

The average velocity of low areas for January and February, 37 statute miles per hour, is the greatest noted for the year. A principal track of February storms east of the Rocky Mountains is from Montana eastward over the Lake region and middle Saint Lawrence valley to southern Newfoundland and the adjoining ocean, and less frequented paths are traced from the middle-eastern slope of the Rocky Mountains and the west Gulf states to the Lake region, and from the south Atlantic coast to Nova Scotia. An average of about two storms per month advance from the Pacific coast north of the 45th parallel and traverse the United States.

Nine low areas appeared during February, 1892, the average number traced for the corresponding month of the last 17 years being 8. Four of the low areas were first located on the northeast slope of the Rocky Mountains, 3 apparently originated on the southeast slope of the Rocky Mountains, one, a continuation of low area XIII for January, was central over Iowa at the opening of the month, and one advanced from the north Pacific coast to Manitoba. The low areas from the northeast slope of the Rocky Mountains moved southeastward over the central valleys and thence eastward, 3 to the Atlantic coast, and one to the Lake region where it dissipated. Two of the low areas from the Southwest moved eastward to the south Atlantic coast, one passed northeastward and disappeared north of the Saint Lawrence Valley, and one low area, not numbered, advanced east-northeast and dissipated over the Ohio Valley.

The north Pacific coast low area moved north of east to Manitoba, where it disappeared. During the early part of the month the pressure was generally low off the north Pacific coast and rain fell throughout the Pacific coast states and over the west part of the plateau region. On the 8th and 9th a low area of slight energy moved northeastward off the west Gulf coast. During the latter part of the month the pressure was low off the south Atlantic coast under the influence of low area VII and a storm which advanced northeastward from extreme southern Florida, and high north to northeast winds prevailed from Hatteras to Cape Cod. No low pressure areas were traced across the continent during the month. The fol-

lowing is a description of the low areas whose tracks are plotted on Chart I:

I.—Was a continuation of low area XIII for January, and at the a. m. report of the 1st was central over Iowa, with pressure below 29.80, and rain from the middle Missouri valley over the Lake region and upper Ohio valley. By the evening report the low area had advanced to western Wisconsin, with a slight increase of central pressure, the pressure had decreased .22 in 12 hours at Pittsburg, Pa., rain was falling in the Southwest and from the Lake region to the south New England and New Jersey coasts, southerly winds of 30 to 40 miles per hour were reported over the southwest Lake region, and the 24-hour increase in temperature was 10° to 20° from the Ohio Valley over the interior of Virginia and the south Atlantic states.

During the 2d the center moved eastward over the Lake region, with pressure below 29.70, the 12-hour decrease of pressure was .30 to .40 over the east part of the lower lake region, the rain area extended over the Lake region and the Atlantic coast states north of the 40th parallel, with snow in New England and the northeastern Lake region, the wind velocities exceeded 30 miles per hour over the lower lakes, and rising followed by falling temperature was noted from the lower Mississippi valley to the lower lake region. By the morning of the 3d the center had advanced off the New England coast, with pressure below 29.70. This low area gained strength during its passage south of Nova Scotia and Newfoundland, the evening report of the 4th showing pressure 29.42 at Sydney, C. B. I.

II.—Appeared the morning of the 4th over extreme southwestern Kansas, with pressure below 29.90, and passed to southwestern Missouri by the evening report, with pressure below 29.80, rain from the middle and southeast slopes of the Rocky Mountains to the Lake region, and a 12-hour decrease of pressure of .30 to .40 in the middle Mississippi valley. Advancing rapidly eastward the center passed off the North Carolina coast during the afternoon of the 5th, attended by fog in the morning on the east Gulf coast, rain in the east-central districts, and high northerly winds in the evening on the North Carolina coast. The southerly course of this low area was caused by high area II, which occupied the extreme upper Mississippi valley and the Lake region during the 5th.

III.—This low area pursued a normal course from the southeast slope of the Rocky Mountains to eastern Ontario. From 8 a. m. to 8 p. m. of the 4th there was a decrease of pressure of .12 to .14 on the south Pacific coast and over the southwest part of the southern plateau, heavy rain fell on the south California coast, and light rain in southern Arizona. During the 5th heavy rain fell in parts of southern California and Arizona, and at the evening report the 12-hour decrease of pressure was .22 at El Paso, Tex. The morning report of the 6th showed a cyclonic area central over western Texas, which advanced to southern Kansas by 8 p. m., with pressure below 29.60. On this date the 12-hour decrease of pressure was .30 to .40 in the middle Mississippi and lower Missouri valleys, the temperature rose 20° in 24 hours at Cairo, Ill., an area of rain extended from the Gulf to Manitoba and eastward to the 87th meridian, the precipitation assuming the form of snow in the middle and upper Missouri valleys, thunderstorms were reported in Missouri and Arkansas, and a wind velocity of 60 miles per hour from the southwest was recorded at Amarillo, Tex.

The morning of the 7th the area was central over Iowa, with pressure below 29.40, the pressure had decreased .40 to .50 in 12 hours over the southwestern part of the Lake region, and the 24-hour temperature rise was 20° to 30° from the Lake region to the east Gulf and south Atlantic states. At the evening report the storm was central near Saginaw Bay, Lower Michigan, with pressure below 29.50, the 12-hour decrease of pressure exceeded .40 from the lower lakes over New York and western New England, and a decided temperature rise was noted east of the Mississippi River, except in eastern

Tennessee. On this date rain fell generally east of the Mississippi River, snow was reported in the Lake region, high winds, reaching a velocity of 55 miles per hour from the southwest at Chicago, Ill., prevailed over the Lake region, a destructive local storm was reported at Cynnet, Ohio, in the afternoon, and thunderstorms were noted in Lower Michigan and New York. During the 8th the center passed northeast of the Great Lakes beyond the region of observation, with snow in the Lake region, northern New York, and central and northern New England.

IV.—Followed the usual course of low areas from the British Northwest Territory to the upper Mississippi valley and thence eastward to New England. The center passed almost directly north from the east New England coast to the Saint Lawrence Valley, and thence southeastward over the Gulf of Saint Lawrence, with the lowest pressure of the month, 28.48, at Sydney, C. B. I. This low area appeared north of western Montana the morning of the 9th, with pressure 29.30 at Edmonton, and a 12-hour decrease of pressure of more than .60 and a 24-hour temperature rise of more than 20° in Alberta. By the evening report the center had advanced southeastward over Assiniboia, with pressure below 29.40, the 12-hour pressure decrease was more than .50 from Manitoba to South Dakota, and the 24-hour rise in temperature was 20° to 30° in that region.

During the 10th the center advanced to Lower Michigan, with pressure below 29.40, and a 12-hour decrease of pressure of .40 to .50 in the upper Mississippi valley and the southwest part of the Lake region. The morning report showed a 24-hour temperature rise of 30° to 40° in the middle Missouri valley, and snow fell from the middle Missouri valley over the Lake region. Moving eastward the center of disturbance passed off the New England coast the evening of the 10th, with pressure below 29.00. On this date the 12-hour decrease of pressure was .50 to .80 on the middle Atlantic and New England coasts, the 24-hour temperature rise was 10° to 20° over northern New England and in the Canadian Maritime Provinces, east to northeast winds of 50 to 60 miles per hour prevailed along the New England coast in the evening, and heavy snow fell in the middle Atlantic and New England states.

The morning of the 12th the storm was central on the east Maine coast, with pressure 28.62 at Eastport, a decrease of .52 in 12 hours, and by the evening report the center had changed position to the lower Saint Lawrence valley with lowest pressure, 29.08, at Father Point, Quebec. On this date a decided fall in temperature occurred in the Atlantic coast states, with high northwest winds at coast stations from Florida northward. The morning of the 13th the center was located east of Cape Breton Island, with pressure 28.48 at Sydney, a decrease of .84 in 12 hours. In the Northeast the weather was colder and clearing, and high westerly winds prevailed north of Hatteras, N. C.

V.—The approach of this low area from the region north of western Montana was shown by the evening report of the 11th. The morning of the 12th it was central over Alberta, with pressure below 29.40, and at the evening report the center occupied northeastern Montana. On this date the 12-hour decrease of pressure was .40 to .60 from Alberta to the middle Missouri Valley, the 24-hour temperature rise was more than 30° from southern Assiniboia over western North Dakota. A "Chinook wind" was reported at Fort Assinaboine, Mont., until 6 p. m., when the temperature fell 30° in one hour. High south to southwest winds prevailed on the northwest coasts of Washington, and a wind velocity of 52 miles per hour from the northwest was reached at Fort Assinaboine, Mont.

Moving southeastward the center reached the lower Missouri valley the evening of the 13th, with pressure below 29.50. The 12-hour decrease of pressure was .20 to .30 from the Lake region to the west Gulf states, the 24-hour temperature rise was 20° to 30° from the middle-eastern slope of the Rocky Mountains over the Ohio Valley, the wind velocity exceeded 50 miles per hour from the southwest at Abilene and

Amarillo, Tex., with thunder and lightning at Abilene, and snow fell in areas in the Lake region. By the evening of the 14th the center reached the lower lake region, with pressure 29.30 at Buffalo, N. Y., a decrease of .36 in 12 hours. The 24-hour temperature rise was more than 20° from the eastern lake region to the south Atlantic coast, and an area of precipitation extended over all districts east of the Mississippi River. Moving east-northeast with a marked loss of strength the center disappeared over the Gulf of Saint Lawrence during the 15th.

VI.—The evening report of the 15th showed a low area over Alberta, with pressure 29.76 at Edmonton, a decrease of .50 in 12 hours. The 24-hour temperature rise at that station was 32°. The morning of the 16th an area of relatively low pressure extended from northeastern Montana over eastern Assiniboia, where the 12-hour decrease of pressure was .20 to .30, and the 24-hour temperature rise was more than 30°. By the evening of the 16th this area occupied southern Montana, with pressure below 30.10. The 12-hour decrease of pressure was .30 to .40 in the Red River of the North Valley, the 24-hour temperature rise was 20° to 30° from the middle Missouri valley to Manitoba, and snow set in during the day in the Red River Valley. Moving eastward as an ill-defined low area of slight energy this disturbance dissipated over the Lake region the night of the 17th.

During the night of the 18-19th and the morning of the 19th a short-lived low area advanced from the southeast slope of the Rocky Mountains to the Ohio Valley, where it dissipated. The passage of this area was attended with general rain in the central valleys, and thunderstorms and heavy rain on the southeast slope of the Rocky Mountains.

VII.—Apparently developed over the west Gulf states, and the evening of the 20th was central over the interior of the east Gulf states, with pressure below 30.00. On this date the pressure and temperature changes were small in the east Gulf states, rain fell generally in the Gulf States, and the rainfall was excessive at points in the east Gulf states. During the 21st the center passed off the south Atlantic coast. Rain fell along the middle Atlantic and Gulf coasts, and the rainfall was excessive in parts of the south Atlantic states. The pressure continued relatively low off the south Atlantic coast during the 22d, 23d, and 24th, with wind velocities of 50 to 60 miles per hour from the north on the North Carolina coast.

VIII.—During the 19th an area of low pressure appeared

over the north Pacific coast states and rain fell on the Pacific coast and over the middle and northern plateau regions. The pressure continued low, below 29.80, on the north Pacific coast during the 20th, and rain fell along the Pacific coast and over the middle plateau region. On the 21st the pressure fell below 29.70 on the north Pacific coast, the rain area extended from the Pacific coast north of the 40th parallel over the northern plateau region, and the wind reached a velocity of 60 miles per hour from the south at Fort Canby, Wash. The morning of the 22d the center had reached Assiniboia, with pressure below 29.90. The 12-hour decrease of pressure was .40 at Swift Current, the 24-hour temperature rise was 20° to 30° over south-east Alberta, southern Assiniboia, and northern Montana, and rain fell in areas from the north Pacific coast to the northeast slope of the Rocky Mountains. During the 23d this low area disappeared north of the Lake region. On this date fog was reported from the middle Missouri valley over the Lake region.

IX.—Apparently developed on the northeast slope of the Rocky Mountains during the 24th and 25th. The evening report of the 24th showed a 12-hour decrease of pressure of more than .30 over Alberta. On the 25th the 12-hour decrease of pressure was more than .10 over the eastern plateau and Rocky Mountain regions, and snow fell in Assiniboia. The evening report of the 26th locates the center over eastern Wyoming, with pressure below 29.90. The 12-hour decrease of pressure was .20 to .30 over the Dakotas, rain fell in areas over the east part of the plateau region, and snow in the Northwest. By the evening of the 27th the center had advanced to the southeast slope of the Rocky Mountains, its eastward advance being prevented by prevailing high pressure over the Lake region and east of the Mississippi River. Recurving to the east-northeast the center of disturbance reached the Ohio Valley the evening of the 28th, with pressure about 30.00. Rain fell generally east of the 100th meridian, followed in the Southwest by clearing weather. Moving eastward the center reached the Virginia coast by the evening report of the 29th, with pressure below 29.80. The 12-hour decrease of pressure was .20 to .30, and the 24-hour temperature rise was 10° to 20° in the Atlantic coast states north of the 35th meridian, rain fell from the Missouri Valley to the Atlantic coast, and wind velocities exceeding 30 miles per hour were noted from the Carolinas to the south New England coast.

Tabulated statement showing principal characteristics of areas of high and low pressure.

Barometer.	First observed.			Last observed.		Duration.	Velocity per hour.	Maximum pressure change in 12 hours, maximum temperature change in 24 hours, and maximum wind velocity.															
	Date.	Lat. N.	Long. W.	Lat. N.	Long. W.			Station.	Rise.	Date.	Station.	Fall.	Date.	Station.	Direction.	Miles per hour.	Date.						
High areas.		°	°	°	°	Days.	Miles.		Inch.				°										
I.....	2	38	100	36	83	2.0	22	Milwaukee, Wis.....	.36	2	Dodge City, Kans.....	24	1	Charlotte, N. C.....	n.	30	3						
II.....	2	46	118	38	78	4.0	28	Wilmington, N. C.....	.42	6	Saugeen, Ont.....	24	4	Kitty Hawk, N. C.....	n.	36	6						
III.....	6	53	104	52	93	1.0	19	Prince Albert, N. W. T....	.34	6	Saint Vincent, Minn.....	26	6	Saint Vincent, Minn.....	n.	26	6						
IV.....	8	52	116	39	77	2.0	48	Calgary, N. W. T.....	.34	8	Duluth, Minn.....	28	9	Eureka, Cal.....	n.	32	8						
V.....	11	53	107	42	71	3.0	27	Sydney, C. B. I.....	.72	13	Huron, S. Dak.....	34	11	Bismarck, N. Dak.....	nw.	36	11						
VI.....	11	37	103	30	80	2.0	35	Corpus Christi, Tex.....	.32	12	Corpus Christi, Tex.....	16	12	El Paso, Tex.....	nw.	34	11						
VII.....	14	53	108	33	80	4.5	23	Erie, Pa.....	.84	15	Swift Current, N. W. T....	52	13	Key West, Fla.....	ne.	36	18						
VIII.....	16	54	116	48	66	4.0	26	Qu'Appelle, N. W. T.....	.38	17	Prince Albert, N. W. T....	44	17	Huron, S. Dak.....	n.	30	17						
IX.....	22	48	125	48	61	6.0	26	White River, Ont.....	.74	26	Father Point, Quebec.....	48	27	Amarillo, Tex.....	n.	48	24						
X and X a...	27	53	107	51	87	2.5	15	Port Arthur, Ont.....	.30	29	Saint Vincent, Minn.....	36	28	Duluth, Minn.....	nw.	28	26						
Mean.....						3.0	27		.48			33				34							
Low areas.									Fall.			Rise.											
I.....	1	43	93	42	69	2.0	28	Oswego, N. Y.....	.38	2	Nashville, Tenn.....	22	2	Buffalo, N. Y.....	sw.	42	2						
II.....	4	37	102	36	84	1.0	39	Cairo, Ill.....	.38	4	do.....	24	5	Hatteras, N. C.....	n.	50	5						
III.....	6	32	102	47	77	2.5	28	Grand Haven, Mich.....	.52	7	Northfield, Vt.....	36	8	Amarillo, Tex.....	sw.	60	6						
IV.....	9	54	115	49	68	3.5	36	Sydney, C. B. I.....	.84	13	Huron, S. Dak.....	42	10	Eastport, Me.....	ne.	60	11						
V.....	12	52	113	46	71	3.0	38	Swift Current, N. W. T....	.66	12	Northfield, Vt.....	50	15	Abilene, Tex.....	sw.	54	13						
VI.....	16	47	110	44	88	1.0	46	Edmonton, N. W. T.....	.50	15	White River, Ont.....	56	17	Amarillo, Tex.....	sw.	54	13						
VII.....	20	32	89	34	75	1.5	24	Augusta, Ga.....	.16	21	Knoxville, Tenn.....	5	20	Saint Vincent, Minn.....	s.	40	19						
VIII.....	21	48	126	52	96	1.5	38	Swift Current, N. W. T....	.40	22	Swift Current, N. W. T....	32	22	Hatteras, N. C.....	n.	60	22						
IX.....	26	44	104	37	75	3.0	32	Minneapolis, Man.....	.38	26	Kitty Hawk, N. C.....	34	23	Fort Canby, Wash.....	s.	60	21						
								Father Point, Quebec.....	.38	28	Saint Vincent, Minn.....	34	27	Sandy Hook, N. J.....	e.	40	29						
Mean.....						2.2	34		.47			34				52							

NORTH ATLANTIC STORMS FOR FEBRUARY, 1892 (pressure in inches and millimeters; wind-force by Beaufort scale).

The paths of storms that appeared over the west part of the north Atlantic Ocean during February, 1892, are shown on Chart I. These paths have been determined from reports of observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

In February there is usually a decrease of pressure over the north Atlantic Ocean, except near Newfoundland and in an area south of the Azores, the decrease being most marked from the British Isles westward to the 40th meridian where it varies from .05 to .10. A decrease of more than .05 occurs in an area south of the Banks of Newfoundland. In the area of higher pressure south of the Azores the increase is less than .05. The principal track of February storms over the north Atlantic Ocean is traced from south of Newfoundland north of east to the 40th meridian, where the track divides, one branch being traced northeastward toward Iceland, and the other east-northeast to the region north of the British Isles. An average of 2.6 storms per month traverse the ocean from the American continent to Europe in February, and the average velocity of storms for that month, about 23 statute miles per hour, is the greatest noted for the year.

In the first decade of February, 1892, stormy weather prevailed along the trans-Atlantic steamship routes from coast to coast, and 2 storms from the American continent, low area XIII for January and low area I for February, apparently reached the European coast. From the 10th to the 14th there was a succession of hard gales over the western part of the ocean, the storms of the 13th attending low area IV being especially severe. From the 12th to 14th the pressure was high over mid-ocean, and high pressure continued over the British Isles from the 9th to 14th. During the 15th and 16th, and from the 19th to 28th the pressure was high off the middle Atlantic and New England coasts, and this condition extended eastward over the Banks of Newfoundland after the 20th.

From the 16th to 23d low pressure prevailed from west of the Azores to the British Isles, causing a prevalence of north to east gales along the steamship tracks east of the 40th meridian. A heavy snowstorm, with hard gales, set in over the British Isles the night of the 15th-16th, and the weather continued stormy in that region until the 23d. From the 17th until the close of the month the weather was unsettled over the southwest part of the ocean. From the 24th to 29th a storm of considerable energy passed from western Cuba to the region east of Bermuda, and low area VII caused unsettled weather off the south Atlantic coast preceding the appearance of this storm. At the close of the month low area IX was central off the middle Atlantic coast.

The morning of the 1st low area XIII for January was central east of Cape Breton Island, with pressure below 29.40 (747). Passing northeastward over Newfoundland and thence north of east over the ocean this storm disappeared north of the British Isles after the 4th, its passage being unattended by disturbances of marked intensity. On the 1st the pressure was low over the British Isles, with strong westerly winds, and unsettled weather continued in that region until the 7th. On the 4th low area I was central southeast of Nova Scotia, with pressure below 29.40 (747) and hard gales. On the 5th the center had reached the Grand Banks attended by northwest gales of force 9 to 10. By the 6th it had advanced to mid-ocean, with strong to whole gales from the 30th to 50th meridians, and by the 7th it was central north of the British Isles.

On the 7th a storm of considerable strength appeared northeast of the Banks of Newfoundland, and southwesterly gales reaching force 11 were reported in that region. By the 8th this storm had moved northeast to mid-ocean, where it disappeared after the 9th. The morning of the 8th a storm of marked energy appeared off the New England coast. By the 9th the center had advanced to the Grand Banks, with pres-

sure below 29.40 (747), and westerly gales of force 8 to 10, and passing thence northeastward disappeared north of the region of observation after the 11th. The evening of the 11th low area IV moved off the New England coast, with northwest gales of force 10 in the steamship tracks west of the 65th meridian. Under the influence of this low area strong westerly gales continued west of the 50th meridian during the 12th. The morning of the 13th the center was east of Cape Breton Island, with the lowest pressure noted for the month, 28.48 (723), at Sydney, C. B. I., and gales of force 10 to 11 in the southern quadrants. By the 14th the center of disturbance had disappeared north of Newfoundland.

On the 15th low pressure was reported over the British Isles, and high winds and heavy snow set in at night. On the 16th a low area appeared near the Azores and the pressure was low thence over the Bay of Biscay and Great Britain, with east to northeast gales along the steamship routes east of the 40th meridian. On the 17th the pressure continued low from the Azores over the British Isles, and a storm appeared central southeast of Nova Scotia. Pressure 29.10 (739) was reported in the Hebrides, and a snowstorm prevailed in Wales and the Highlands of Scotland. On the 18th low pressure continued from the Grand Banks to the Azores and thence over the Bay of Biscay and the British Isles. Pressure 28.90 (734) was reported at the Scilly Islands. Northeasterly gales of force 10 to 11 were encountered east of the 30th meridian, and northwesterly gales of force 8 to 9 were reported west of the 50th meridian. On the 19th the pressure conditions remained materially unchanged. Pressure below 29.00 (737) was noted in the Bay of Biscay. Northeasterly gales of force 8 to 10 prevailed east of the 30th meridian, and fresh northerly gales were reported south of Newfoundland and Nova Scotia. Heavy snowstorms prevailed over Great Britain, and a number of marine disasters were reported on the British coasts.

On the 20th a trough of low pressure extended from south of the Banks of Newfoundland to the British Isles, and the pressure fell to 28.75 (730) in Ireland. Fierce gales swept the English Channel and heavy snow continued over England. On the 21st the western end of the trough of low pressure had swung southward and it extended from west-southwest of the Azores to the British Isles, and the position of this elongated area of low pressure was materially unchanged on the 22d, when heavy gales prevailed throughout the British Isles, and disastrous storms were reported in Spain. On the 23d the low pressure area had contracted, a storm was central southwest of the Azores, and the pressure was 29.10 (739) in southwestern Ireland. Many vessels were reported wrecked off the English coast. On the 23d the pressure increased rapidly over and near the Azores.

The low pressure area over the British Isles apparently shifted position to the westward from the 24th to the 27th, and at the close of the month was central west of the Bay of Biscay. The night of the 21st low area VII moved off the south Atlantic coast, where the pressure continued low until the arrival of a storm which advanced from south of the Florida Peninsula to the region east of Bermuda from the 24th to 29th. The morning of the 29th the presence of a cyclonic area of slight energy was indicated off the south Atlantic coast, and the evening of that date low area IX passed off the Virginia coast.

OCEAN FOG.

The limits of fog belts west of the 40th meridian, as reported by shipmasters, are shown on Chart I by dotted shading. East of the 55th meridian fog was reported on 9 dates; between the 55th and 65th meridians on 2 dates; and west of the 65th meridian on 4 dates. Compared with the corresponding month of the last 4 years the dates of occurrence of fog east of the 55th meridian numbered 2 less than the average; between the 55th and 65th meridians 4 less than the average; and west of the 65th meridian 1 less than the average. The occurrence of

fog along the steamship tracks west of the 40th meridian and at stations of the Weather Bureau along the middle Atlantic and New England coasts generally attended the approach or passage of general storms.

OCEAN ICE.

The region in which ice was reported for the current month is shown on Chart I by ruled shading. The southernmost ice reported, a small iceberg observed on the 11th in the position given, was nearly 4° north of the average southern limit of Arctic ice for February, and the easternmost ice noted, 2 small bergs sighted on the 8th in the position given in the table, was nearly 3° west of the average eastern limit of ice for February. Ice was reported during the month as follows: 8th, N. 49° 05', W. 46° 20', 2 small icebergs; N. 48° 34', W. 48° 36', several small bergs. 9th, N. 47° 48', W. 52° 10', 5 miles of field ice. 11th, N. 47° 25', W. 47° 55', a small berg. 12th, 10 miles east-northeast from Saint Johns, N. F., field of ice. 15th, N. 47° 40', W. 48° 40', an iceberg 25 feet out of

water. 16th, N. 47° 59', W. 48° 38', several small flocs of ice.

The following table shows the southern and eastern limits of the region within which icebergs or field ice were reported for February during the last 10 years:

Southern limit.			Eastern limit.		
Month.	Lat. N.	Long. W.	Month.	Lat. N.	Long. W.
February, 1883.....	42 01	52 46	February, 1883.....	46 10	45 44
February, 1884.....	42 00	50 00	February, 1884.....	46 50	43 45
February, 1885.....	41 50	51 12	February, 1885.....	47 53	42 00
February, 1886.....	46 10	47 15	February, 1886.....	48 00	44 47
February, 1887.....	40 00	48 00	February, 1887.....	46 26	41 50
February, 1888.....	44 59	45 08	February, 1888.....	44 59	45 08
February, 1889.....	45 35	48 00	February, 1889.....	45 35	48 00
February, 1890.....	41 12	50 12	February, 1890.....	44 30	35 30
February, 1891.....	44 20	48 00	February, 1891.....	44 33	44 59
February, 1892.....	47 25	47 55	February, 1892.....	49 05	46 30
Mean.....	43 33	48 50	Mean.....	46 24	43 49

TEMPERATURE OF THE AIR (expressed in degrees, Fahrenheit).

Many of the voluntary stations do not have standard thermometers or shelters.

The distribution of mean temperature over the United States and Canada for February, 1892, is exhibited on Chart II by dotted isotherms. In the table of miscellaneous meteorological data the monthly mean temperature and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for mean temperature and departure from the normal show, respectively, the average for the several districts. The normal for any district may be found by adding the departure to the current mean when the departure is below the normal and subtracting when above. The monthly mean temperature for regular stations of the Weather Bureau represents the mean of the maximum and minimum temperatures.

The mean temperature was highest over the southern part of the Florida Peninsula, where it was above 65; it was above 60 over a great part of the Florida Peninsula, along the middle and west Gulf coasts, in Texas south of the 30th parallel, and at stations in the Colorado Desert in southeastern California; and was above 50 in the Gulf States, southern and western Arizona, southern California, and in California west of the Sierra Nevada Mountains and south of the 41st parallel. The lowest mean temperature was noted in Manitoba, where it was below zero; the mean readings were below 20 along the northern border of the country east of the 110th meridian, and in the Red River of the North and middle Missouri valleys; and values below 30 were reported north of a line traced from the south New England coast westward to the middle-eastern slope of the Rocky Mountains, thence to northern New Mexico, and thence irregularly northwestward to north-central Washington.

DEPARTURES FROM NORMAL TEMPERATURE.

The mean temperature was generally above the normal, except in the Atlantic coast states from Virginia over the Florida Peninsula. The greatest departure above the normal temperature, 10, was reported at Helena, Mont., and the excess was more than 5 over the northern plateau region, on the northeast slope of the Rocky Mountains, from Minnesota and Wisconsin over the lower Missouri valley, from northeastern Ontario to the Gulf of Saint Lawrence, and in the interior of eastern Texas. The most marked deficiency in temperature occurred along the North Carolina coast, where it was 2 to 3.

DEVIATIONS FROM NORMAL TEMPERATURE.

The following table shows for certain stations, as reported by voluntary observers, (1) the normal temperature for February for a series of years; (2) the length of record during which

the observations have been taken, and from which the normal has been computed; (3) the mean temperature for February, 1892; (4) the departure of the current month from the normal; (5) and the extreme monthly mean for February during the period of observation and the years of occurrence:

State and station.	(1) Normal for the month of Feb.	(2) Length of record.	(3) Mean for Feb., 1892.	(4) Departure from normal.	(5) Extreme monthly mean for February.			
					Highest.	Year.	Lowest.	Year.
<i>Arizona.</i>	°	Years	°	°	°		°	
Fort Apache.....	39.6	20	40.9	+ 1.3	43.6	1879	32.4	1880
Fort Mohave.....	56.2	20	57.7	+ 1.5	62.0	1879	50.2	1882
Whipple Barracks.....	39.1	20	36.6	- 2.5	45.1	1879	30.0	1880
<i>Arkansas.</i>								
Lead Hill.....	41.1	10	.....	.....	49.9	1882	32.2	1885
<i>California.</i>								
Fort Bidwell.....	33.2	21	35.2	+ 2.0	42.8	1886	25.3	1874
Riverside.....	52.1	10	53.8	+ 1.7	58.0	1886	48.0	1891
<i>Colorado.</i>								
Las Animas.....	30.9	10	34.2	+ 3.3	37.9	1888	22.2	1883
<i>Florida.</i>								
Merritts Island.....	66.2	10	63.9	- 2.3	72.6	1883	58.0	1889
<i>Georgia.</i>								
Forsyth.....	52.4	18	54.9	+ 2.5	59.6	1890	44.5	1885
<i>Idaho.</i>								
Boise Barracks.....	34.1	18	29.9	- 4.2	40.3	1888	21.3	1883
Fort Sherman.....	26.9	9	.....	.....	37.0	1886	17.0	1887
<i>Illinois.</i>								
Centralia.....	33.0	13	38.0	+ 5.0	44.0	1880	22.0	1885
<i>Indiana.</i>								
La Fayette.....	28.8	12	35.0	+ 6.2	38.0	1882	14.7	1885
<i>Indian Territory.</i>								
Fort Supply.....	36.5	13	36.8	+ 2.3	44.1	1882	32.0	1883
<i>Iowa.</i>								
Cresco.....	15.4	20	23.3	+ 7.9	31.3	1878	1.0	1875
<i>Kansas.</i>								
Eureka Ranch.....	29.8	9	35.6	+ 5.8	37.6	1888	25.8	1885
Independence.....	35.5	20	41.1	+ 5.6	45.7	1882	25.2	1885
Salina.....	30.1	9	34.9	+ 4.8	37.0	1886	23.4	1885
<i>Louisiana.</i>								
Grand Coteau.....	59.3	9	60.6	+ 1.3	64.6	1887	52.4	1885
<i>Maine.</i>								
Orono.....	19.0	22	22.9	+ 3.9	25.0	1877	13.3	1885
<i>Maryland.</i>								
Cumberland.....	31.4	33	34.5	+ 3.1	40.0	1890	19.4	1868
<i>Michigan.</i>								
Kalamazoo.....	26.0	16	30.2	+ 4.2	35.0	1882	11.2	1885
<i>Missouri.</i>								
Chillicothe.....	30.9	8	41.2	+ 10.3	41.2	1892	23.0	1885
Sedalia.....	33.4	9	37.4	+ 4.0	45.9	1882	20.7	1885
<i>Montana.</i>								
Fort Custer.....	19.2	11	.....	.....	30.2	1886	2.4	1887
<i>Nebraska.</i>								
Fort Robinson.....	24.4	8	27.2	+ 2.8	33.7	1886	15.9	1891
Genoa (near).....	22.0	16	26.0	+ 4.0	32.8	1877	13.2	1891
<i>Nevada.</i>								
Browns.....	37.6	21	39.8	+ 2.2	49.0	1872	24.8	1883
Carson City.....	34.0	15	34.2	+ 0.2	42.2	1886	23.9	1883
<i>New Hampshire.</i>								
Hanover.....	18.7	55	23.0	+ 4.3	27.2	1840	10.8	1885
<i>New Mexico.</i>								
Deming.....	47.8	10	50.4	+ 2.6	51.3	1887	41.8	1889
Fort Wingate.....	33.4	31	36.0	+ 2.6	40.0	1879	26.0	1880

Deviations from normal temperature—Continued.

State and station.	(1) Normal for the month of Feb.	(2) Length of record.	(3) Mean for Feb., 1892.	(4) Departure from normal.	(5) Extreme monthly mean for February.			
					Highest.	Year.	Lowest.	Year.
<i>New York.</i>		<i>Years</i>						
Cooperstown.....	21.2	35	23.2	+ 2.0	31.7	1857	10.5	1885
Plattsburgh Barracks...	18.2	21	19.2	+ 1.0	25.7	1877	7.2	1885
<i>North Carolina.</i>								
Lenoir.....	40.5	19	41.8	+ 1.3	49.0	1890	30.3	1875
<i>Oklahoma.</i>								
Fort Reno.....	38.5	9	47.8	+ 9.3	45.2	1890	33.0	1885
Fort Sill.....	42.5	20	47.8	+ 5.3	47.8	1892	35.6	1885
<i>Oregon.</i>								
Bandon.....	44.0	8	44.3	+ 0.3	49.2	1889	38.8	1887
Eola.....	39.6	21	41.0	+ 1.4	46.5	1885	31.0	1887
<i>Pennsylvania.</i>								
Dyberry.....	22.5	27	25.6	+ 3.1	30.1	1890	13.3	1868
Grampian Hills.....	25.0	27	26.5	+ 1.5	33.8	1890	13.7	1885
Wellsborough.....	26.8	12	26.9	+ 0.1	34.0	1890	16.7	1885
<i>South Carolina.</i>								
Statesburgh.....	50.4	11	48.8	- 1.6	56.6	1890	41.8	1885
<i>South Dakota.</i>								
Fort Sully.....	17.2	21	18.0	+ 0.8	33.4	1877	2.2	1887
<i>Texas.</i>								
Austin.....	54.7	20	57.1	+ 2.4	60.6	1890	48.9	1885
Silver Falls.....	46.4	6	47.8	+ 1.4	47.9	1886	41.0	1889
<i>Utah.</i>								
Terrace.....	30.4	19	33.6	+ 3.2	40.7	1886	16.0	1882
<i>Vermont.</i>								
Stratford.....	18.4	18	21.1	+ 2.7	25.7	1877	11.0	1885
<i>Virginia.</i>								
Dale Enterprise.....	37.1	12	35.6	- 1.5	44.8	1890	23.9	1885
<i>Washington.</i>								
Fort Townsend.....	40.1	20	39.9	- 0.2	47.0	1885	31.7	1887
<i>West Virginia.</i>								
Parkersburg.....	38.3	11	37.3	- 1.0	48.0	1882	30.1	1889
<i>Wisconsin.</i>								
Embarrass.....	16.5	20	21.4	+ 4.9	30.7	1877	- 2.7	1875
Madison.....	20.8	25	24.8	+ 4.0	32.8	1878	3.2	1875
<i>Wyoming.</i>								
Fort Washakie.....	21.9	9	26.9	+ 5.0	35.8	1886	- 1.0	1883

YEARS OF HIGHEST MEAN TEMPERATURE FOR FEBRUARY.

The highest mean temperature for February occurred at Jacksonville, Fla., in 1891; in the middle and south Atlantic and south New England states, in the interior of the east Gulf states, generally in Louisiana, and on the west Gulf coast in 1890; over the northern plateau region in 1888; on the middle Gulf coast in 1887; on the middle and south Pacific coasts in 1886; on the north Pacific coast in 1885; from the east part of the Lake region southwestward over the Ohio, middle Mississippi, and lower Missouri valleys to east-central Texas, and in the lower Rio Grande valley in 1882; in northern Wisconsin and Upper Michigan in 1878; and in the middle Missouri valley, Minnesota, and on the Maine coast in 1877.

YEARS OF LOWEST MEAN TEMPERATURE FOR FEBRUARY.

The lowest mean temperature for February occurred at Valentine, Nebr., in 1891; along the south part of the Atlantic coast in 1889; on the middle and north Pacific coasts, and from the north Pacific coast to the Dakotas in 1887; from the Rocky Mountain slope eastward, south of the 40th parallel, to the Atlantic coast (save along the south part of the south Atlantic coast), and in New York and south New England in 1885; in the Red River of the North Valley in 1884; in northern Utah and Wyoming and thence to western Kansas and western Nebraska in 1883; from the south Pacific coast over the southern plateau region in 1882; and from the middle Missouri valley over the Lake region and northern New England in 1875.

MAXIMUM TEMPERATURE.

At Galveston, Tex., the maximum temperature for the current month, 75, was the highest ever reported for February, and the maximum at Brownsville, Tex., and Valentine, Nebr., was as high as previously reported for February.

The highest temperature reported at a regular station of the Weather Bureau, 89, was noted at Brownsville, Tex., on the 11th. Reports of voluntary observers show temperature 90 and above in the lower Rio Grande valley and in south-central Arizona and southeastern California. The maximum temperature was above 80 over the southern half of the Florida Penin-

sula, over a great part of east and southeast Texas, and in the Gila and lower Colorado valleys. The maximum temperature was lowest in the lower Red River of the North valley, northern Lower Michigan, and eastern Upper Michigan, where it was below 40, and the maximum readings were below 50 north of a line traced from southeastern New York westward to the middle Missouri valley, and thence northwestward to eastern Montana. The maximum readings were also below 50 at more elevated stations in the middle and northern Rocky Mountain regions.

MINIMUM TEMPERATURE.

The lowest temperature reported at a regular station of the Weather Bureau was -33, at Saint Vincent, Minn., on the 15th. The minimum temperature was below zero north of a line traced from the Maine coast to the north part of the middle plateau region and thence northeastward to western Montana, at elevated stations in the middle and northern Rocky Mountain and plateau regions, and at mountain stations in Virginia and West Virginia, and was below 20 north of a line traced from North Carolina to southern Illinois, thence to southeastern Arizona, and thence along the Sierra Nevada and Cascade mountain ranges to north-central Washington. The minimum temperature was highest over extreme southern Florida and in the lower Rio Grande valley, where it was above 50, and it was above 40 over the southern half of the Florida Peninsula, along the middle and west coasts of the Gulf of Mexico, in the San Joaquin valley in California, and on the middle California coast.

LIMITS OF FREEZING WEATHER.

The southern limit of freezing weather is shown on Chart V by a line traced from Charleston, S. C., and Savannah, Ga., westward to east-central Mississippi, thence northwestward to about the mouth of the Arkansas River, and thence west-southwest to the Rio Grande River. The western limit of freezing weather is shown by a line traced from south-central Arizona north-northwest along the Sierra Nevada Mountain range to northern California, and thence along the Oregon and Washington coasts.

TEMPERATURE, JANUARY AND FEBRUARY.

For the period January 1 to February 29, 1892, the mean temperature averaged about normal in the middle Atlantic states, the Ohio Valley and Tennessee, and the lower lake region. In the extreme northwest and over the northern plateau region the mean temperature averaged about 5, on the northeast slope of the Rocky Mountains about 4, in the Missouri valley about 3, in New England, the upper lake region, the upper Mississippi valley, on the middle-eastern slope of the Rocky Mountains, and on the north and middle Pacific coasts about 2, and in the west Gulf states, on the southeast slope of the Rocky Mountains, over the southern plateau region, and on the south Pacific coast about 1 above the normal temperature for the period named. In the south Atlantic states and at Key West, Fla., the mean temperature was about 2 deficient, and in the east Gulf states and over the middle plateau region the deficiency for that period was about 1.

RANGES OF TEMPERATURE.

The greatest daily range of temperature is shown in the table of miscellaneous meteorological data. The greatest monthly range of temperature, 74, was noted at Bismarck, N. Dak., and Fort Assinaboine, Mont. From the north-central districts the monthly ranges decreased eastward to less than 40 on the south New England coast and at Hatteras, N. C., southeastward to less than 30 over extreme southern Florida and along the Louisiana and east Texas coasts, and westward to less than 30 along the immediate Pacific coast from San Diego, Cal., to Tatoosh Island, Wash.

PERIODS OF HIGH TEMPERATURE.

On the 1st and 2d a warm wave advanced from the Lake region and upper Mississippi valley to the middle and south Atlantic states, attended by the highest temperature of the

month in the districts named. The morning report of the 5th showed a 24-hour temperature rise of 10 to 20 over the middle and east Gulf states, and the highest temperature of the month was noted in the Gulf States on the 5th and 6th. During the 6th a warm wave advanced from the Lake Superior region over the Ohio Valley and reached the Atlantic coast on the 7th, with a temperature rise of more than 20 from New England to Florida.

A warm wave appeared in the Northwest on the 9th, advanced to the Lake region and the Ohio Valley by the 10th, with a temperature rise of 30 to 40 in 24 hours in the middle Missouri valley, and extended over New England and the Canadian Maritime Provinces during the 11th. The morning report of the 12th showed a 24-hour temperature rise of more than 30 in the Northwest. The warm wave extended over the Missouri Valley during that date, over the Ohio Valley during the 13th, with a temperature rise of 20 to 30 from the upper Mississippi valley over Tennessee, reached the Atlantic coast on the 14th, and the morning of the 15th the 24-hour rise was 20 to 50 in New England. A marked rise in temperature occurred in the Northwest on the 15th; the morning report of the 16th showed a rise of more than 30 in Assiniboia and north-eastern Montana; a rise of 30 to 50 occurred from the extreme upper Mississippi valley over the Lake Superior region by the morning of the 17th; and the warm wave reached the middle Atlantic and New England states during the 18th. No well defined warm waves traversed the districts east of the Rocky Mountains after the 18th.

PERIODS OF LOW TEMPERATURE.

On the 1st the temperature fell more than 20 in Kansas; during the 2d the cool wave advanced over the middle Mississippi and Ohio valleys, with a temperature fall of more than 20 in Oklahoma Territory and southern Missouri, and temperature below freezing to northern Texas and central New Mexico; and on the 3d reached the middle Atlantic coast, with a temperature fall of 20 in western Tennessee. The morning of the 5th a temperature fall of more than 20 was shown on the middle-eastern and southeast slopes of the Rocky Mountains, with zero temperature at North Platte, Nebr., and temperature below freezing in western Texas; during the 5th the temperature fell thence eastward to the middle Atlantic and New England coasts, and the morning of the 6th the temperature was below freezing in eastern Tennessee and along the Atlantic coast to South Carolina. On the 6th the temperature fell more than 20 in Manitoba and 10 to 14 over the southern Rocky Mountain region.

During the 7th a temperature fall of 10 to 20 occurred in areas from the western Lake region to Texas, and freezing weather was reported north of a line traced from northern Lower Michigan to southern New Mexico. Advancing eastward the cold wave reached the Ohio Valley on the 8th, with a temperature fall of more than 20 along the middle Ohio River, and reached the middle Atlantic coast unattended by severe cold

on the 9th. The temperature fell more than 20 in the Northwest on the 10th; the cold wave extended to the Ohio Valley by the 11th, with temperature below zero in the eastern Dakotas and Minnesota, and freezing weather to southern Arkansas and central Texas; and reached the Atlantic coast states on the 12th, with a temperature fall of more than 20, and freezing weather to central Georgia and northern South Carolina.

The most important cold wave of the month appeared in the Northwest on the 13th, where the temperature fell 40 to 50, and was below zero in North Dakota, Manitoba, and the Saskatchewan Valley. During the 14th the cold wave advanced over the western Lake region and the lower Ohio valley, the temperature fell 20 to 30 from the southeast slope of the Rocky Mountains to Manitoba and the western Lake Superior region, and the line of freezing weather extended from southern New Mexico to the southern Lake region. On the 15th the temperature fall was 20 to 30 from the lower Mississippi valley over the Lake region, zero temperature was noted in northern Missouri and northern Illinois, the line of freezing weather extended from central Texas to Virginia, and the lowest temperature of the month occurred in north-central districts, the minimum being -20 to -30 in North Dakota and northern Minnesota. By the evening of the 15th the cold wave reached the middle Atlantic coast. The morning of the 16th a 24-hour temperature fall of more than 20 was noted along the middle Atlantic and New England coasts, and the line of freezing weather extended from Arkansas to the Virginia coast.

From the 16th to 19th a cold wave advanced from the northeast slope of the Rocky Mountains to the west Gulf states, with temperature falls of 20 to 30 during the 16th, 17th, and 18th. From the 25th to 27th a cold wave advanced from the northeast slope of the Rocky Mountains to New England and the Canadian Maritime Provinces, with temperature falls of 20 to 30, and in the lower Saint Lawrence valley the 24-hour fall in temperature was more than 40. From the 27th to 29th a moderate cold wave advanced from the Northwest over the central valleys.

FROST.

Frost was noted generally over the Florida Peninsula north of the 27th parallel on the 13th, and along the immediate middle coast of the Gulf of Mexico on the 1st, 13th, 17th, 26th, and 27th. No frost was reported in Texas south of the 30th parallel. Frost was reported on a number of dates in the mountains of central and northern New Mexico and eastern Arizona. Frost was reported on the Pacific coast as follows: In the Santa Lucia Mountains in Monterey Co., Cal., 7th; and 9th to 12th; at Alvarado, Alameda Co., Cal., on the 11th; at Sacramento, Cal., on the 2d, 3d, and 7th; at Eureka, Cal., on the 2d, 8th, 9th, and 14th; at Roseburg, Oregon, on the 1st, 2d, 3d, 5th, 14th, and 15th; at Eola and Albany, Oregon, on a number of dates; at Astoria, Oregon, on the 16th and 17th; at Port Angeles, Wash., on the 6th, 17th, and 24th; and at East Sound, Wash., on the 2d to 8th, 13th, 14th, and 24th.

PRECIPITATION (expressed in inches and hundredths).

The distribution of precipitation over the United States and Canada for February, 1892, as determined from the reports of about 2,000 stations, is exhibited on Chart III. In the table of miscellaneous meteorological data the total precipitation and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for precipitation and departure from the normal show, respectively, the averages for the several districts. The normal for any district may be found by adding the departure to the current mean when the precipitation is below the normal and subtracting when above.

In February the monthly precipitation is usually greatest on the extreme north Pacific coast, where it exceeds 11.00 at Neah Bay, Wash. In areas on the immediate Pacific coast north of

the 42d parallel, and along the line of the Central Pacific Railroad crossing the summit of the Sierra Nevada Mountains in California, the average precipitation for February exceeds 8.00, and it is 4.00 to 6.00 generally along the Pacific coast, and in the central valleys of California north of the 38th parallel. In an area extending southward over central Utah, and in the mountains of north-central Colorado the normal amount is 2.00 to 4.00. East of the Rocky Mountains the greatest precipitation is noted over a great part of the Gulf States east of the 95th meridian, and in parts of southern Tennessee, where it is more than 6.00, and the normal amount is generally greater than 4.00 in the Gulf States, Kentucky, Tennessee, the interior of the south Atlantic states, over the southwest and northern parts of the Florida Peninsula, and along the Atlantic coast

from North Carolina to the Gulf of Saint Lawrence. Over the greater part of the Rocky Mountain and plateau regions the precipitation is less than 1.00, and in large areas in those districts the normal amount for February is less than 0.50. The average amount is less than 2.00 from the Lake Superior region westward and southward to the eastern Rocky Mountain slope, and thence southward to the Rio Grande River.

In February, 1892, the greatest monthly precipitation, 11.13, was reported at Felton, Cal.; at Boulder Creek, Cal., a depth of 9.51 was noted; and the amount reported exceeded 8.00 at Georgetown, Cal., Huntingburgh, Ind., and Appleton City, Mo. Precipitation to exceed 6.00 was noted at Neah Bay, Wash., and Astoria, Oregon, on the California coast between Eureka and San Francisco, at stations on the Central Pacific Railroad in the Sierra Nevada Mountains, at Julian, San Diego Co., Cal., in an area extending from southwestern Kansas over central Missouri, in northeastern South Carolina, and at Hatteras, N. C. Less than 0.50 fell in central Washington east of the Cascade Mountain range, over a great part of southeastern California, in large areas of the eastern plateau and Rocky Mountain regions, from northeastern North Dakota over the northern Lake Superior region, on the middle Gulf coast, and over the Florida Peninsula between the 39th and 40th parallels. Less than 1.00 fell along the middle and east Gulf coasts, over the north part of the Florida Peninsula, from the eastern part of the southern plateau region over western and southern Texas, in the middle and upper Missouri and Red River of the North valleys, generally over the middle and northern plateau regions, and in southeastern California.

DEPARTURES FROM NORMAL PRECIPITATION.

The monthly precipitation was generally deficient. An area of excess extended from the extreme south Pacific coast over the southern plateau region and the middle eastern slope of the Rocky Mountains to the lower Missouri valley. A second area of excess occupied a great part of the Lake region and extended thence to the eastern Dakotas, and more than the usual amount of rain fell at points in eastern Virginia and the eastern Carolinas. The most marked deficiency in monthly precipitation was noted in western Washington, where it varied from 4.00 to nearly 6.00. At New Orleans, La., the deficiency was more than 4.00, and it was more than 2.00 on the east and south New England coasts, in New Jersey and eastern Pennsylvania, from Tennessee to the middle and east Gulf and north Florida coasts, and on the Pacific coast north of the 42d parallel. The greatest excess in monthly precipitation occurred at Hatteras, N. C., and Leavenworth, Kans., where it was more than 2.00, and the excess was more than 1.00 at Palestine, Tex., Tucson, Ariz., Marquette, Mich., and Norfolk, Va.; elsewhere in districts where the precipitation was greater than the normal the excess was less than 1.00.

Considered by districts the average percentage of the normal in districts where the monthly precipitation was in excess was about as follows: middle-eastern slope of the Rocky Mountains, 242; southern plateau region, 183; lower Missouri valley, 133; upper lake region, 105; south Pacific coast, 103. In districts where the precipitation was deficient the percentage of the normal was about as follows: northern plateau region, 36; New England, 41; east Gulf states, 43; north Pacific coast, 50; Ohio Valley and Tennessee, 68; west Gulf states, 73; middle Atlantic states, 77; southeast slope of the Rocky Mountains, 78; middle plateau region, 79; south Atlantic states, 81; middle Pacific coast, 86; Key West, Fla., 94; lower lake region, 96. On the northeast slope of the Rocky Mountains, in the extreme northwest, and in the upper Mississippi valley the monthly precipitation averaged about normal.

DEVIATIONS FROM AVERAGE PRECIPITATION.

The following table shows for certain stations, as reported by voluntary observers, (1) the average precipitation for February for a series of years; (2) the length of record during which the observations have been taken and from which the average has been computed; (3) the total precipitation for

February, 1892; (4) the departure of the current month from the average; (5) and the extremes for February during the period of observation and the years of occurrence:

State and station.	(1) Average for the month of Feb.	(2) Length of record.	(3) Total for Feb., 1892.	(4) Departure from average.	(5) Extremes for February.			
					Greatest.		Least.	
					Am't.	Year.	Am't.	Year.
<i>Arizona.</i>	<i>Inches.</i>	<i>Years.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>		<i>Inches.</i>	
Fort Apache.....	1.92	16	2.29	+ 0.37	4.10	1891	0.89	1889
Fort Mohave.....	0.91	20	1.74	+ 0.83	5.00	1874	0.00	
Whipple Barracks.....	1.92	20	1.64	- 0.28	6.55	1884	0.01	1876
<i>Arkansas.</i>								
Lead Hill.....	4.79	10	1.24	- 3.55	10.93	1884	1.24	1892
<i>California.</i>								
Fort Bidwell.....	2.43	21	1.20	- 1.23	6.00	1881	0.00	1879
Riverside.....	2.80	11	0.60	- 2.20	7.94	1884	0.00	1885
<i>Colorado.</i>								
Las Animas.....	0.26	10	0.53	+ 0.27	0.59	1888	0.00	1891
<i>Florida.</i>								
Merritts Island.....	2.70	14	2.77	+ 0.07	6.01	1888	0.15	1882
<i>Georgia.</i>								
Forsyth.....	4.57	18	4.93	+ 0.36	8.11	1891	1.19	1879
<i>Idaho.</i>								
Boise Barracks.....	1.77	18	0.25	- 1.52	6.49	1872	T.	1889
Fort Sherman.....	2.31	9	0.32	- 1.99	5.81	1890	0.42	1889
<i>Illinois.</i>								
Centralia.....	3.73	11	5.65	+ 1.92	10.35	1883	0.85	1885
<i>Indiana.</i>								
La Fayette.....	3.26	12	2.19	- 1.07	7.43	1883	1.20	1889
<i>Indian Territory.</i>								
Fort Supply.....	0.77	13	2.02	+ 1.25	3.06	1874	0.00	1887
<i>Iowa.</i>								
Cresco.....	1.01	20	1.02	+ 0.01	1.88	1887	0.07	1877
<i>Kansas.</i>								
Independence.....	2.10	20	4.88	+ 2.78	7.04	1881	0.25	1872
Salina.....	0.55	9	2.01	+ 1.46	2.01	1892	T.	1891
<i>Louisiana.</i>								
Grand Coteau.....	3.54	9	2.04	- 1.50	8.42	1891	1.37	1886
<i>Maine.</i>								
Orono.....	4.10	22	1.96	- 2.14	8.39	1876	1.20	1877
<i>Maryland.</i>								
Cumberland.....	2.64	19	1.72	- 0.92	4.92	1882	0.60	1877
<i>Michigan.</i>								
Kalamazoo.....	2.68	16	2.26	- 0.42	5.44	1881	0.12	1877
<i>Missouri.</i>								
Chillicothe.....	2.19	8	2.01	- 0.18	3.95	1885	0.80	1884
Sedalia.....	2.42	13	6.42	+ 4.00	6.42	1892	0.65	1879
<i>Montana.</i>								
Fort Custer.....	0.45	12	0.60	+ 0.15	1.29	1885	0.02	1882
<i>Nebraska.</i>								
Genoa (near).....	0.76	16	1.64	+ 0.88	2.55	1891	0.10	1889
<i>Nevada.</i>								
Browns.....	0.56	21	0.52	- 0.04	2.05	1872	0.00	1882, 1889
Carson City.....	1.35	15	1.39	+ 0.04	4.18	1891	0.08	1877
<i>New Hampshire.</i>								
Hanover.....	2.35	48	1.41	- 0.94	7.67	1887	0.50	1865
<i>New Mexico.</i>								
Deming.....	0.42	9	0.86	+ 0.44	1.78	1888	0.00	1883, 1890
Fort Wingate.....	1.71	21	1.40	- 0.31	11.20	1873	0.05	1881
<i>New York.</i>								
Cooperstown.....	2.23	38	2.23	0.00	5.21	1887	0.60	1896
Plattsburgh Barracks.....	1.34	21	2.47	+ 1.13	2.69	1880	0.20	1888
<i>North Carolina.</i>								
Lenoir.....	4.39	20	2.10	- 2.29	9.00	1873	0.60	1877
<i>Oklahoma.</i>								
Fort Reno.....	1.16	7	1.00	- 0.16	2.84	1889	0.13	1891
Fort Sill.....	1.24	20	1.23	- 0.01	3.45	1881	T.	1876
<i>Oregon.</i>								
Randon.....	9.22	14	2.11	- 7.11	17.82	1881	2.11	1892
Eola.....	5.60	22	1.23	- 4.37	13.24	1872	0.35	1889
<i>Pennsylvania.</i>								
Dyberry.....	2.79	26	1.29	- 1.50	5.59	1884	0.60	1877
Grampian Hills.....	3.63	20	3.17	- 0.46	7.62	1887	1.56	1872
Wellsborough.....	5.62	12	2.21	- 3.46	10.93	1884	0.95	1887
<i>South Carolina.</i>								
Statesburgh.....	2.76	10	4.23	+ 1.47	5.47	1889	1.18	1883
<i>South Dakota.</i>								
Fort Sully.....	0.42	21	0.50	+ 0.08	1.50	1871	0.03	1877
<i>Texas.</i>								
Austin.....	2.63	20	2.44	- 0.19	7.22	1888	T.	1885
Silver Falls.....	0.95	5	0.10	- 0.85	2.07	1887	T.	1891
<i>Utah.</i>								
Terrace.....	0.34	18	.....	.....	1.30	1881	0.00	†
<i>Vermont.</i>								
Stratford.....	2.90	18	1.50	- 1.40	5.90	1887	0.30	1877
<i>Virginia.</i>								
Dale Enterprise.....	3.40	12	1.90	- 1.50	9.00	1884	0.83	1882
<i>Washington.</i>								
Fort Townsend.....	1.85	17	1.78	- 0.07	3.94	1879	0.37	1886
<i>West Virginia.</i>								
Parkersburg.....	3.74	7	4.27	+ 0.53	7.42	1887	1.40	1886
<i>Wisconsin.</i>								
Embarrass.....	2.27	21	3.13	+ 0.88	4.70	1887	0.35	1877
Madison.....	1.72	27	1.94	+ 0.22	7.90	1869	0.30	1877
<i>Wyoming.</i>								
Fort Washakie.....	0.31	9	0.30	- 0.01	1.04	1881	0.04	1882

* Frequently.

† 1875, 1876, and 1889.

PRECIPITATION, JANUARY AND FEBRUARY.

For the period January 1 to February 29, 1892, the precipitation averaged more than double the usual amount in the

southern plateau region, and was one-tenth to four-tenths greater than usual in the east Gulf states, the upper Mississippi and lower Missouri valleys, and on the middle-eastern slope of the Rocky Mountains. In New England, at Key West, Fla., in the west Gulf states, the Ohio Valley and Tennessee, the extreme northwest, on the southeast slope of the Rocky Mountains, over the northern plateau region, and along the Pacific coast five-tenths to eight-tenths of the usual precipitation was reported. In the middle and south Atlantic states, the Lake region, on the northeast slope of the Rocky Mountains, and over the middle plateau region the precipitation for the period named averaged about normal.

YEARS OF GREATEST PRECIPITATION FOR FEBRUARY.

At Palestine, Tex., Sedalia, Mo., Salina, Kans., and Montrose, Colo., the precipitation for the current month was the greatest ever reported for February by 0.10, 1.47, 0.24, and 0.16, respectively. In the upper Ohio valley and at Lake Erie stations the greatest precipitation for February occurred in 1887; on the Washington coast in 1885; in the middle Ohio valley, Maine, from New Jersey southwestward over central North Carolina, on the south Pacific coast, and over the west part of the southern plateau region in 1884; in the middle Mississippi and lower Ohio valleys in 1882; from the southeast slope of the Rocky Mountains to the upper Mississippi and Red River of the North valleys, and over the northern plateau region and the west part of the middle plateau region in 1881; on the middle Pacific coast in 1878; in the lower Rio Grande valley in 1877; and along the south Atlantic coast in 1874.

YEARS OF LEAST PRECIPITATION FOR FEBRUARY.

At Pensacola, Fla., New Orleans, La., Lead Hill, Ark., Bandon, Oregon, and Tatoosh Island, Wash., the precipitation for the current month was the least ever reported for February by 1.50, 0.94, 0.23, 0.46, and 2.60, respectively. Over the northern plateau region and generally on the north Pacific coast the least precipitation for February occurred in 1889; on the middle Pacific coast in 1886; on the south Pacific coast in 1885; in the lower Rio Grande valley in 1884; in southern Arizona in 1881; and in the middle and upper Mississippi valleys, the middle and lower Ohio valleys, the Lake region, New York, New England, and Virginia in 1877.

EXCESSIVE PRECIPITATION.

The following tables show, by states, the number of stations reporting monthly precipitation to equal or exceed 10.00; precipitation to equal or exceed 2.50 in 24 hours; and precipitation to equal or exceed 1.00 in 1 hour in February, 1892:

Monthly precipitation to equal or exceed 10.00.

State.	Number of stations.	State.	Number of stations.
California.....	1		

Precipitation to equal or exceed 2.50 in 24 hours.

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
South Carolina.....	5	19-20, 20, 20-21, 21.	Arkansas.....	1	6.
Louisiana.....	4	19, 20.	Maine.....	1	11-12.
Mississippi.....	4	7, 19, 19-20.	Florida.....	1	23-24.
California.....	3	19, 20, 21.	North Carolina.....	1	28-29.
Georgia.....	3	7, 7-8, 8-9.	Tennessee.....	1	7.
Missouri.....	2	18-19, 24.	Texas.....	1	19.

Precipitation to equal or exceed 1.00 in 1 hour.

Texas.....	2	19.			
------------	---	-----	--	--	--

Table of excessive precipitation, February, 1892.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
<i>Arkansas.</i>	<i>Inches.</i>	<i>Inches.</i>		<i>Inches.</i>	<i>h. m.</i>	
Osecola.....	2.60	6				
<i>California.</i>						
Felton.....	11.13					
Georgetown.....	3.00	20				
Grass Valley.....	2.67	19				
Kennedy Gold Mine.....	2.94	21				
<i>Florida.</i>						
Hypoluxo.....	3.24	23-24				
<i>Georgia.</i>						
La Grange.....	2.80	7				
Monticello.....	2.50	7-8				
Quitman.....	3.50	8-9				
<i>Louisiana.</i>						
Girard.....	2.70	20				
Liberty Hill.....	2.70	19				
Monroe.....	3.92	20				
North Louisiana Experiment Station.....	3.52	19				
<i>Maine.</i>						
Calais.....	2.61	11-12				
<i>Mississippi.</i>						
Fayette.....	2.91	19-20				
Hattiesburg.....	2.81	19				
Okolona.....	2.70	7				
Waynesborough.....	2.50	19				
<i>Missouri.</i>						
Appleton City.....	2.65	24				
Columbia.....	2.78	18-19				
<i>North Carolina.</i>						
Hatteras.....	2.67	28-29				
<i>South Carolina.</i>						
Anderson.....	2.75	21				
Belmont.....	3.25	19-20				
Camden.....	4.15	20-21				
Effingham.....	2.87	21				
Winnabow.....	2.97	20				
<i>Tennessee.</i>						
Dunlap.....	3.21	7				
<i>Texas.</i>						
Palestine.....	3.17	19	1.12	1 00	19	
Waco.....			1.10	0 30	19	

MAXIMUM RAINFALL IN ONE HOUR OR LESS.

The following table is a record of the heaviest rainfall during February, 1892, for periods of five and ten minutes and one hour, as reported by regular stations of the Weather Bureau furnished with self-registering gauges:

Station.	Maximum fall in—					
	5 min.	Date.	10 min.	Date.	1 hour.	Date.
	<i>Inch.</i>		<i>Inch.</i>		<i>Inch.</i>	
Atlanta, Ga.....	0.12	20	0.17	20	0.47	20
Bismarck, N. Dak.†.....						
Boston, Mass.†.....						
Buffalo, N. Y.†.....						
Cincinnati, Ohio.....	0.03	2	0.05	2	0.20	3
Chicago, Ill. *.....						
Cleveland, Ohio.....	0.02	14	0.03	14	0.10	14
Denver, Colo.†.....						
Detroit, Mich.....	0.05	25	0.06	25	0.13	25
Dodge City, Kans. *.....						
Duluth, Minn.†.....						
Eastport, Me.†.....						
Galveston, Tex.....	0.20	20	0.35	20	0.80	20
Indianapolis, Ind.....	0.05	19	0.07	19	0.17	19
Jacksonville, Fla.....	0.07	15	0.09	15	0.19	15
Jupiter, Fla.....	0.17	17	0.20	24	0.60	24
Kansas City, Mo.....	0.05	4.7	0.06	7	0.30	4
Key West, Fla.....	0.10	24	0.16	24	0.73	24
Marquette, Mich.†.....						
Memphis, Tenn.....	0.30	6	0.55	6	0.65	6
New York, N. Y.....	0.01	20	0.02	20	0.10	20
New Orleans, La.†.....						
Norfolk, Va.....	0.06	8	0.09	8	0.35	8
Philadelphia, Pa.....	0.03	29	0.05	29	0.24	29
Philadelphia Water Works.....	0.02	29	0.03	29	0.20	29
Pittsburg, Pa.....	0.02	25	0.03	25	0.13	25
Portland, Oregon.....	0.05	26	0.06	26	0.18	26
Saint Louis, Mo.....	0.05	1	0.10	1	0.30	1
Saint Paul, Minn.†.....						
San Diego, Cal.....	0.10	5	0.15	5	0.30	5
San Francisco, Cal.....	0.04	17	0.08	17	0.25	17
Savannah, Ga.....	0.17	9	0.24	9	0.76	9
Washington, D. C.....	0.03	29	0.05	29	0.25	29
Wilmington, N. C.....	0.06	15	0.07	8, 15	0.21	8, 15

* Record incomplete. † No record on account of snow. ‡ Less than 0.05 in 1 hour.

The following tables show the number of years for which monthly precipitation to equal or exceed 10.00 inches, daily

precipitation to equal or exceed 2.50 inches, and hourly precipitation to equal or exceed 1.00 inch has been reported in the several states and territories for February during the last 22 years.

Excessive monthly precipitation.

State.	No. years noted.	State.	No. years noted.
California	14	New Hampshire	1
Oregon	11	New Mexico	1
Washington	10	Virginia	1
Tennessee	9	Arizona	1
North Carolina	8	Utah	1
Texas	8	Colorado	1
Alabama	7	The Dakotas	0
Indiana	6	Delaware	0
Mississippi	6	District of Columbia	0
New York	5	Idaho	0
Georgia	5	Indian Territory	0
Florida	4	Iowa	0
Louisiana	4	Maine	0
Arkansas	3	Maryland	0
Connecticut	3	Minnesota	0
Kentucky	3	Missouri	0
Pennsylvania	3	Montana	0
Illinois	3	Nebraska	0
Massachusetts	2	Nevada	0
Ohio	2	New Jersey	0
Rhode Island	2	Vermont	0
South Carolina	2	West Virginia	0
Kansas	1	Wisconsin	0
Michigan	1	Wyoming	0

Excessive daily precipitation (24 hours).

Texas	13	Arizona	2
Alabama	12	Iowa	2
Georgia	12	Massachusetts	2
Tennessee	12	The Dakotas	1
New York	10	Delaware	1
Illinois	9	New Jersey	1
Arkansas	9	Rhode Island	1
Louisiana	9	South Carolina	1
North Carolina	9	Colorado	1
Florida	8	District of Columbia	0
Mississippi	7	Idaho	0
Oregon	6	Indian Territory	0
Kentucky	5	Minnesota	0
Connecticut	5	Montana	0
Ohio	5	Nebraska	0
California	5	Nevada	0
Indiana	4	New Hampshire	0
Michigan	4	New Mexico	0
Pennsylvania	4	Utah	0
Kansas	3	Vermont	0
Maryland	3	Washington	0
Virginia	3	West Virginia	0
Maine	3	Wisconsin	0
Missouri	3	Wyoming	0

Excessive hourly precipitation.

Tennessee	7	Kentucky	0
North Carolina	4	Maine	0
Texas	4	Maryland	0
California	3	Massachusetts	0
Mississippi	3	Minnesota	0
Alabama	2	Missouri	0
Arkansas	2	Montana	0
Florida	1	Nebraska	0
Georgia	1	Nevada	0
Louisiana	1	New Hampshire	0
Michigan	1	New Jersey	0
Pennsylvania	1	New Mexico	0
Arizona	0	New York	0
Colorado	0	Ohio	0
Connecticut	0	Oregon	0
The Dakotas	0	Rhode Island	0
Delaware	0	South Carolina	0
District of Columbia	0	Utah	0
Idaho	0	Vermont	0
Illinois	0	Virginia	0
Indiana	0	Washington	0
Indian Territory	0	West Virginia	0
Iowa	0	Wisconsin	0
Kansas	0	Wyoming	0

The following tables give exceptionally heavy monthly, daily, and hourly precipitation reported for February during the last 22 years:

Monthly.

Station and state.	Am't.	Year.	Station and state.	Am't.	Year.
Boulder Creek, Cal	Inches.		Felton, Cal	Inches.	
Cuyamaca, Cal	34.03	1891	Summit, Cal	21.69	1891
Laurel, Cal	32.20	1891	Crescent City, Cal	20.70	1887
Cisco, Cal	28.95	1891	Highlands, N. C.	20.35	1891
	22.85	1887		20.20	1891

Daily (24 hours).

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			Inches.	
Stonewall Mine, Cal	23.90	21-24, 1891	Luling, La	6.24	13-14, 1891
Cuyamaca, Cal	22.40	22-23, 1891	Palermo, Cal	6.12	14-15, 1891
Santa Rosa Ranch, Cal	15.33	21-23, 1891	Vacaville, Cal	6.10	14-15, 1891
Oneida, N. Y	10.10	13, 1874	Highlands, N. C.	6.01	8-9, 1891
Emilie, La	8.42	12-14, 1891	Mt. Vernon B'ks, Ala	5.82	13, 1891
Maurepas, La	7.55	15, 1891	Monroe, La	5.73	12-13, 1891
Julian, Cal	7.48	23-24, 1891	Athens, Ga	5.26	7, 1891
Oakland, Cal	6.65	15, 1891	Los Gatos, Cal	5.12	14-15, 1891
Farleys Camp, Ariz	6.45	17-18, 1891	Kosciusko, Miss	5.00	12-13, 1891
Campo, Cal	6.40	21-22, 1891			

One hour and less.

Station and state.	Amount.	Time.	Date.
	Inches.	A. M.	
Memphis, Tenn.	0.30	0 05	6, 1892
Do	0.25	0 05	8, 1891
Do	0.55	0 10	6, 1892
Little Rock, Ark.	0.70	0 12	6, 1892
Louisville, Miss	1.03	0 30	25, 1890
Galveston, Tex.	3.04	0 55	27, 1872
Do	3.31	1 00	22, 1888

SNOW (in inches and tenths).

The snowfall was reported unusually heavy in the Adirondack Mountains, New York. In nearly all parts of Iowa the snowfall was insufficient to protect crops, and in some localities wheat and other grains were injured. On the 7th an unusually heavy fall of snow was reported at Lordsburgh, N. Mex., and reports stated that the heaviest fall in years occurred in the mountains near that place. Heavy snow was reported on the 8th at Ishpeming, Mich. At Pierre, S. Dak., snow was badly drifted and travel impeded on the 10th. A heavy snowstorm prevailed over a great part of New York and New England on the 11th and 12th, and snow fell on those dates generally over the middle Atlantic states.

MONTHLY SNOWFALL.

The depth of snowfall for the month, as reported by regular and voluntary observers of the Weather Bureau, is shown on Chart V. The greatest depth of snowfall reported was 49, at Calais, Me.; more than 40 fell at Cumbres, Colo., and Turin, N. Y. The monthly snowfall exceeded 30 at Summit, Cal., Palmetto, Nev., Natural Bridge (Strawberry, Coconino Co.), Ariz., Chama, N. Mex., Atlantic, Mich., and Monroe, Mass.; it exceeded 20 in Maine, except along the coast, in a large area in west-central New England, in northern New Hampshire and northern Vermont, at Blue Knob, Pa., in Upper Michigan, northwest Lower Michigan, northeast Wisconsin, at Hayes Centre, Nebr., Fort Yellowstone, Wyo., in the mountains of Colorado, northern New Mexico, central Arizona, and eastern California, in southwest Nevada, and at Julian, San Diego Co., Cal.; and it exceeded 10 in the mountains of Virginia and West Virginia, over a great part of New York and the upper lake region, from central Nebraska to west-central Kansas, in the middle Rocky Mountain regions, in northern Wyoming, northeast lower Idaho, in an area extending from central Arizona to central Nevada, and in eastern California between the 38th and 40th parallels.

Snowfall of 10 inches, or more, was reported as follows, and in states and territories where the maximum depth was less than that amount the station reporting the greatest is given: **Arizona.**—Natural Bridge, 32.5; Antelope Valley, 22; Strawberry, 18.51; Whipple Barracks, 11.1. **Arkansas.**—Lead Hill, trace. **California.**—Summit, 34; Boca, 26; Cisco, 21; Julian, 20; Towles, 16; Emigrant Gap, 15; Truckee, 12. **Colorado.**—Cumbres, 45; Steamboat Springs, 32; Climax, 30; Rico, 28.5; Ward District, 28; Red Cliff, 26.8; Amherst, 26; Platoro, 25.7; Pagoda (near), 19; Le Roy, 18.3; Julesburg, 18.2; Jefferson, 17.5; Gold Hill, 17; Dillon, 16.2; Moraine, 15.5;

Smoky Hill Mine and Robb, 15; Avoca, Castle Rock, Dumont, Greenhorn, Meeker, and San Acacia, 13; San Luis, 12.8; Gaynor and Yuma, 12.5; Villa Grove, 12.2; Brush, 12; Livermore and Stamford, 11; Grover and Thon, 10.

Connecticut.—Canton, 12; New Hartford, 10.5; West Simsbury, 10. *Delaware*.—Dover, 2.5. *District of Columbia*.—Washington, 7.5. *Georgia*.—Diamond, trace. *Idaho*.—Henry's Lake, 14. *Illinois*.—Fairmount, 8.6. *Indiana*.—Mauzy, 9.2. *Indian Territory*.—Fort Supply, 4. *Iowa*.—Webster City, 9.8. *Kansas*.—McAllaster, 17.2; Norton and Oberlin, 14; Gove City, 12. *Kentucky*.—Fort Thomas, 5.1. *Maine*.—Calais, 49; Kents Hill, 39; Indian Stream and Belfast, 24; Farmington, 23; Lewiston, 21; Cornish, 19.5; Fairfield, 19; East Machias, 18; Orono, 17.5; Eastport, 17.3; Houlton, 17; Portland, 16.8; Fort Preble, 12.5. *Maryland*.—Cumberland (a), 12; Hagerstown, 10.5.

Massachusetts.—Monroe, 30; Groton (a), 27; Fitchburg (a and b), 23; Florida (b) and Leominster, 22; Wakefield, 21; Mount Nonotuck, Savoy, and Gilbertville, 20; Kendall Green and Turners Falls, 19; Concord, 18.5; Ludlow (a), Leicester, North Billerica, and Williamstown, 18; Chesnut Hill, 17.5; Andover and Blue Hill (Summit), 17; Ashland, Mansfield, and Roxbury, 16; Dudley and Westborough, 15; Springfield Armory, 14.5; Amherst Experiment Station (a and b), Lake Cochituate, Lawrence, and Salem (b), 14; Amherst, Milton, Newburyport (a), and Roberts Dam, 12; Boston and Fall River (a), 11.5; Randolph, 11; Fiskdale, Monson, and New Bedford (a), 10.

Michigan.—Atlantic, 30; Marquette, 27.5; Harbor Springs, 25.5; Cheboygan, 25; Harrisville, 24.1; Lathrop, 24; Berrien Springs (a), 23.5; Escanaba, 23.2; Crystal Falls, 22.5; McMillan, 21; Ivan, 20.2; Weldon Creek, 19.1; Fort Mackinac, 18.4; Calumet and Sand Beach, 18; Charlevoix, 16.6; Sault de Ste. Marie, 16.5; Berlin, 15.6; Alpena, 15.3; Caldwell, 15; Lansing, 14.8; Saint Ignace and Thornville, 14; Washington, 13.5; Grayling, 13; Olivet, 11.2; Fitchburgh and North Aurelius, 11; Bear Lake and Kalamazoo, 10.8; Ball Mountain, 10.6; Bellaire, 10.5; Ann Arbor and Highland Station, 10. *Minnesota*.—Farmington, 16; Fort Ripley and Rolling Green, 12; Duluth, 11.4; Maple Plain, 11.2; Fergus Falls (a), 10.

Missouri.—Oregon (a), 2.6. *Montana*.—Martinsdale, 13.5; Dearborn Canyon, 12.8. *Nebraska*.—Hayes Centre, 22.5; Kimball, 15; Fort Sidney and Precept, 12; Marquette, 11.5; Minden, 11.1; Ravenna, 11; Ansley, 10. *Nevada*.—Palmetto, 38; Elko, 30; Tybo, 23; Pioche, 16.8; Belmont, 16.5; Lewers Ranch, 16; Wadsworth, 13.2; Virginia City, 13; Reno State University, 12; Genoa and Verdi, 10. *New Hampshire*.—Peterborough, 26; Manchester, 24.6; North Conway, 21; Nashua, 20.2; West Milan and Wiers Bridge, 20; Plymouth, 19; Berlin Mills, 18.5; Newton, 18; East Canterbury, 16; Concord (a), 15; Littleton, 14; Strafford, 10. *New Jersey*.—Tenafly, 5.5. *New Mexico*.—Chama, 32.5; Dulce, 18.5; Monero, 18; Fort Wingate, 14.

New York.—Turin, 42.3; Constableville, 41; Potsdam, 35; Number Four, 33.7; Le Roy, 33; Utica, 31; Oswego, 27.7; Humphrey, 23.7; Baldwinsville, 23.5; Plattsburgh Barracks, 22.9; Glen Falls, 21.8; Sherman, 21.5; Malone, 19.2; Coopers-town, 18; Watervliet Arsenal, 17; South Canisteo and Angelica, 16.5; North Hammond, 15.5; Canton, 13.3; Alfred Centre, 12.8; Oxford, 12.2; Buffalo, 10.8; Madison Barracks, 10.6; Rochester, 10.3; Arcade, 10.1; Palermo, 10. *North Carolina*.—Bryson City, 2. *North Dakota*.—Saint Johns, 11.5; Kelso, 10. *Ohio*.—Garrettsville and Jacksonborough, 10. *Oklahoma*.—Gate City, 5. *Oregon*.—Siskiyou, 5.5. *Pennsylvania*.—Blue Knob, 22.2; Somerset, 20.5; Confluence, 20; Stoyestown, 19; Grampian Hills, 18.5; Emporium and Saegerstown, 16; Honesdale, 13; Pleasant Mount, 11.2; Wysox, 11; McConnellsburgh, 10.5.

Rhode Island.—Providence (c), 10. *South Dakota*.—Millbank, 12.5; Spearfish, 11. *Tennessee*.—Rugby, 1. *Texas*.—Ochiltree, 0.1. *Utah*.—Losee, 14.5; Provo City, 11. *Vermont*.—Burlington and Jacksonville, 26; Brattleborough (a),

25; Enosburgh Falls and Vernon, 20; Northfield, 19.6; Hartland, 19.2; Chelsea and Strafford, 18; Wells, 17; Lunenburg, 11.5. *Virginia*.—Staunton, 16; Lexington, 15; Dale Enterprise, 12.5; Woodstock, 11. *Washington*.—Spokane, 3.1. *West Virginia*.—White Sulphur Springs, 17; Alderson, 15; Martinsburgh and Romney, 12.5; Beverly and Parkersburgh, 10.5; Elkhorn and Tannery, 10.

Wisconsin.—Crandon, 25.8; Florence, 25.7; Embarrass, 23.2; Butternut, 23; Peshtigo, 20; Koepenick, 18; Green Bay, 17.1; Viroqua, 17; Bayfield, 16; De Pere, 15.7; Medford (b), 15.6; Medford (a) and Portage, 15.5; Phillips, 15; Columbus and Hayward, 14.8; Oconto, 14.5; Harvey, 13.3; Eau Claire (a), 13; Chippewa Falls and Oshkosh, 12.5; Appleton and Plover, 12; Menomonie, 11.8; Madison, 11.5; New Holstein and Wittenberg, 11.4; Milwaukee, 10.6; Weston, 10.5; Beaver Dam, 10.2; Fond du Lac, 10. *Wyoming*.—Fort Yellowstone, 21; Fort McKinney, 13.5; Cheyenne, 11.7; Fort D. A. Russell, 10.

DEPTH OF SNOW ON GROUND ON 15TH AND AT THE CLOSE OF THE MONTH.

Chart VI shows the depth of snow on the ground at the close of the month, as reported by regular and voluntary observers of the Weather Bureau.

On the 15th a depth of 36 was reported in northern New Hampshire, 31 in the interior of Maine, 20 to 40 in the Adirondack region in New York, and 20 to 30 in Upper Michigan and parts of northern Lower Michigan, in east-central North Dakota, the mountains of Colorado, and central Idaho. More than 10 was noted generally in New England north of Connecticut, in central and northern New York, over the north half of the upper Lake region, in central and northeast North Dakota, north-central and south-central Colorado, and at many points in the plateau region between the 39th and 45th parallels.

At the close of the month a depth of 24 was reported in the interior of Maine, 20 to 30 in the Adirondacks, New York, 24 at Atlantic, Mich., and more than 20 in the mountains of Colorado. The depth of snow exceeded 10 in northern New England and northern and central New York, over the north part of the upper lake region, in central North Dakota, and in west-central Idaho.

HAIL.

Description of the more severe hailstorms of the month is given under "Local storms." Hail was reported as follows: 1st, Arizona, New York, and Pennsylvania. 2d, New Jersey and New York. 3d, Arizona and Colorado. 4th, California and Utah. 5th, Arizona, California, Kansas, and Virginia. 6th, California and Arkansas. 7th, Arizona, California, Illinois, Indiana, Iowa, Maryland, New Jersey, New York, Ohio, Pennsylvania, Tennessee, and Texas. 8th, Arizona, California, and Ohio. 11th, Maryland, Massachusetts, New Jersey, and New York. 13th, Texas. 14th, Kentucky, New York, and Pennsylvania. 15th, New Mexico. 17th, Kansas. 18th, Iowa and Mississippi. 19th, Iowa, Louisiana, New Jersey, New York, and Texas. 20th, Texas. 22d, Wyoming. 23d, North Carolina. 24th, California. 26th, New Mexico and Washington. 28th, Missouri, North Carolina, Oregon, Tennessee, and Virginia. 29th, New York, Pennsylvania, Tennessee, and Virginia.

SLEET.

Description of the more severe sleet storms of the month is given under "Local storms." Sleet was reported as follows: 1st, Michigan, Nebraska, New York, Ohio, Pennsylvania, South Dakota, and Wisconsin. 2d, Connecticut, New Jersey, New York, Ohio, Pennsylvania, and Virginia. 3d, Maine, New Mexico, Ohio, and Pennsylvania. 4th, California, Iowa, Nebraska, and Wisconsin. 5th, Arizona. 6th, Illinois, Iowa, Kansas, and Nebraska. 7th, Connecticut, Illinois, Iowa, Louisiana, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Virginia, and Washington. 8th, California, Colorado, Maine, Massachusetts, New Hampshire, New York, Ohio, and Wisconsin.

9th, Connecticut, Massachusetts, and Pennsylvania. 10th, Illinois and Iowa. 11th, Connecticut, New Mexico, and New York. 12th, Ohio. 13th, Washington. 14th, Connecticut, Illinois, Iowa, Michigan, New York, and Pennsylvania. 15th, Iowa and Missouri. 18th, Iowa, Kansas, Michigan, Missouri, and Ohio. 19th, Illinois, Iowa, Kansas, New York, Ohio, Oklahoma Territory, Pennsylvania, and Washington. 20th,

Arkansas, Nebraska, North Dakota, Pennsylvania, and South Dakota. 22d, Nebraska and North Dakota. 24th, Iowa and Wisconsin. 26th, New Mexico. 27th, Kansas, Nebraska, New Mexico, North Carolina, North Dakota, and Virginia. 28th, Virginia. 29th, Montana, Nebraska, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and Wisconsin.

WINDS.

The prevailing winds in February, 1892, are shown on Chart II by arrows flying with the wind. In New England, the middle Atlantic states, the Ohio Valley and Tennessee, the lower lake region, the extreme northwest, the upper Mississippi valley, and on the northeast slope of the Rocky Mountains they were generally from northwest to northeast; in the south Atlantic states and over the Florida Peninsula, from north to northeast; in the east Gulf states, from north to east; in the Missouri Valley and on the southeast slope of the Rocky Mountains, from northwest to north; on the middle-eastern slope of the Rocky Mountains and on the south Pacific coast, from west to northwest; over the northern plateau region, from southeast to southwest; on the north Pacific coast, from east to south; on the middle Pacific coast, from west to north; and in the west Gulf states, the upper lake region, and over the middle and southern plateau regions, variable.

HIGH WINDS.

[In miles per hour.]

Wind velocities of 50 miles, or more, per hour were reported at regular stations of the Weather Bureau as follows: 3d, 60, e., at Tatoosh Island, Wash. 5th, 53, n., at Kitty Hawk, N. C.; 50, n., at Hatteras, N. C. 6th, 60, sw. at Amarillo, Tex. 7th, 55, sw., at Chicago, Ill. 9th, 57, nw., at Fort Assinaboine, Mont. 11th, 60, ne., at Eastport, Me.; 50, e., at Block Island, R. I. 12th, 52, nw., at Fort Assinaboine, Mont. 13th, 54, sw., at Abilene, Tex.; 54, sw., at Amarillo, Tex. 21st, 60, s., at Fort Canby, Wash. 22d, 60, n., at Hatteras, N. C.; 60, n., at Kitty Hawk, N. C. 23d, 56, n., at Hatteras, N. C.; 55, n., at Kitty Hawk, N. C. 24th, 52, n., at Hatteras, N. C. 27th, 64, ne., at Block Island, R. I. 28th, 51, ne., at Block Island, R. I.

LOCAL STORMS.

A heavy rain and snow storm was reported in Yavapai county, Ariz., during the first five days of the month. After the 3d the precipitation at Prescott was largely in the form of snow, and the snowfall in the mountains near that place was quite heavy.

5th.—About 10 a. m., during a snowstorm with high northeast wind, the "Red D" Line S. S. "Venezuela" went ashore on Brigantine Shoals on the New Jersey coast, but was floated off at high tide on the 7th. In the evening heavy north to northwest squalls were reported off the North Carolina coast.

6th.—At Lamonte, Mo., a thunderstorm occurred 1.30 p. m.; a barn was struck by lightning and burned; and one horse was killed and another badly shocked by lightning. At Little Rock, Ark., a thunderstorm from the southwest began 6.15 p. m., with heavy rain and a few small hailstones; 0.70 inch of rain fell in 12 minutes, flooding sewers in the lower part of the city.

7th.—A destructive storm from the southwest was reported in the southern part of Wood county, Ohio, at 3 p. m., local

time. The path of destruction was 40 rods in width; the storm was preceded by excessive rainfall; it was attended with heavy thunder; hail one-fourth inch in diameter fell; and the damage to buildings in the vicinity of Cygnet was estimated at \$2,500. At Detroit, Mich., the wind reached a velocity of 36 miles per hour from the southwest at 10.55 p. m.; sleet and rain fell at intervals during the day; and at 4.50 p. m. a thunderstorm, with heavy rain, was observed at Windsor, Ontario. A heavy thunderstorm lasting 20 minutes, without precipitation, was reported at Baldwinsville, N. Y.

11th.—A heavy snow and rain storm, with high wind, prevailed along the New England and middle Atlantic coasts. At Boston, Mass., snow fell to a depth of 6 inches; coastwise steamers were delayed; and considerable damage was caused to electric wires. At Leicester, Mass., 12 inches of snow fell, and the storm was reported the most severe of the winter. At Woods Holl, Mass., snow changed to rain 10 a. m., and the wind was high in the evening. At Block Island, R. I., heavy rain fell, and the wind reached a velocity of 50 miles per hour from the east at 10.14 a. m. At Nantucket, Mass., the storm was reported the severest of the season. Rain began in the early morning and continued until 2.09 p. m., when thunder and lightning, with heavy hail lasting one minute, were observed. The wind reached a velocity of 49 miles per hour from the southeast at noon; at 2.15 p. m. it shifted to southwest, and at 6.30 to west. At Baltimore, Md., snow began 7.15 a. m., and fell heavily at intervals until 9.25 a. m., when it changed to rain, and the rain ended 10.05 a. m. From 1 to 1.45 p. m. the wind was high from the northwest, reaching a velocity of 35 miles per hour at 1.25 p. m. A report from Lutherville, about 12 miles north of Baltimore, states that a rain and thunder storm visited that place about 4.10 p. m. The storm advanced from the west, with high wind and small hail, and lasted about 30 minutes. The snowstorm continued in eastern Massachusetts until the early morning of the 12th, a depth of 7 to 12 inches being noted. At Manchester, N. H., snow fell to a depth of 15 inches.

12th.—At Port Angeles, Wash., the wind backed suddenly from east to southwest in the early morning and reached a velocity of 30 miles per hour. At 11.46 a. m. a velocity of 46 miles per hour from the south was recorded, and the gale continued until 4 p. m.

13th.—High south to west winds occurred on the southeast slope of the Rocky Mountains. In the evening thunder and lightning, with heavy dashes of rain, preceded a gust from the southwest, during which a velocity of 54 miles per hour was noted at Abilene, Tex.

19th.—At Palestine, Tex., a thunderstorm from the southwest, with heavy rain, began 5.05 p. m. and ended 9.10 p. m.; 2.64 inches of rain fell in 2 hours and 50 minutes; washouts were reported on railroads, and there was a marked fall in temperature.

22d.—High northerly winds and light rain prevailed at Hatteras, N. C. The schooner "Annie E. Pierce" went ashore about 10 miles north of Hatteras; one person was drowned, another was injured, and the vessel was a total loss.

24th.—At Jupiter, Fla., brisk northeast winds prevailed and a heavy sea was running. During a squall near Lake Worth Inlet the schooner "Bessie B." went ashore, and the vessel and cargo were reported a total loss.

INLAND NAVIGATION.

ICE IN LAKES AND RIVERS.

At Burlington, Vt., Lake Champlain was frozen on the 14th.

Saint Clair River.—On the 2d the ferryboat broke the ice in a narrow passage between Port Huron and Sarnia and the regular trips were resumed. High wind on the 4th caused the ice to move from the foot of Lake Huron, and the Saint Clair River was open from Port Huron to the Lake. Large quantities of floating ice were reported in the river on the 20th.

A report from Detroit, Mich., states that Lake Saint Clair was frozen over on the 1st; 5th, floating ice in river at Detroit; 15th, river frozen over, but ice broken by ferryboats; 20th, floating ice disappeared.

The entrance to the harbor at Grand Haven, Mich., was almost blocked by slush ice on the 9th.

Susquehanna River.—At Lock Haven, Pa., on the west branch of the Susquehanna, the river was frozen from the 1st to 6th, 11th to 13th, and 15th to 25th; ice was moving on the 26th and 27th. At Wilkes Barre, Pa., the river was frozen on the 1st.

Allegheny River.—On the 14th an ice gorge extended from Red Bank, 50 miles above Pittsburg, to above Parkers Landing; on the 16th the ice gorge at Red Bank was 9 miles in length and the ice was 6 to 9 feet in thickness; 18th, ice gorge remained unchanged; 20th, ice gorge broke about noon; 21st, ice from gorge passed Pittsburg in the morning.

At Pittsburg, Pa., floating ice was reported in the Monongahela River on the 1st, 2d, 5th to 7th, and 15th to 21st, and in the Allegheny River on the 1st, 5th to 8th, and 10th to 22d. A report from Parkersburgh, W. Va., states that drift ice from the gorge in the Allegheny River passed that place on the 22d and 23d. At Marietta, Ohio, floating ice was reported in the Ohio River on the 1st, 2d, 14th, and 17th to 19th.

The first boat of the season from Saint Louis, Mo., reached Havana, Ill., on the Illinois River, on the 28th.

Mississippi River.—At La Crosse, Wis., the ice was becoming very soft on the 20th; 26th, ice at the mouth of the Black River broke up in the early morning, and a channel opened in the ice at La Crosse. At Dubuque, Iowa, the ice began to break up on the 29th, but the river was gorged with ice below that place. At Le Claire, Iowa, the river was frozen from the 1st to 25th; the ice broke up on the 26th. At Muscatine, Iowa, the ice moved out of the river on the 25th. At Davenport, Iowa, the ice moved out on the 4th.

Missouri River.—At Pierre, S. Dak., the river was frozen over during the month. At Plattsmouth, Nebr., the river was clear of ice on the 24th. At Leavenworth, Kans., the river was clear of ice on the 3d; floating ice on the 8th, 11th, and 15th to 17th. At Saint Joseph, Mo., the river was blocked with ice from the 1st to 16th; 17th, ice running out of river; 18th, river clear of ice.

STAGE OF WATER IN RIVERS.

In the following table are shown the danger-points at the various river stations; the highest and lowest stages for the month, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, February, 1892 (in feet and tenths).

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
Red River.						
Shreveport, La.	29.9	29	11.6	8.9	4.8	6.8
Arkansas River.						
Fort Smith, Ark.	22.0	11	8.4	3.4	3.1	5.3
Little Rock, Ark.	23.0	23, 24	11.7	3.4	5.6	6.1
Missouri River.						
Fort Buford, N. Dak.	21.0	29	9.7	4	5.6	4.1
Mississippi River.						
Saint Paul, Minn.	14.0					
La Crosse, Wis.	11.8					
Dubuque, Iowa	16.0					
Davenport, Iowa	15.0	16	8.0	28	4.7	3.3
Keokuk, Iowa	14.0	10	6.8	22, 23, 24	1.3	5.5
Saint Louis, Mo.	30.0	21	17.5	1	6.7	6.8
Cairo, Ill.	40.0	24, 25	32.5	6	17.5	15.0
Memphis, Tenn.	33.0	27	24.2	8	12.6	11.6
Vicksburg, Miss.	41.0	29	32.8	12	21.1	11.7
New Orleans, La.	13.0	29	11.5	14, 15	7.7	3.8
Ohio River.						
Parkersburgh, W. Va.	38.0	23	19.3	3	6.0	13.3
Cincinnati, Ohio	45.0	12	29.6	2	13.9	15.7
Louisville, Ky.	24.0	15, 27	11.9	2	7.7	4.2
Cumberland River.						
Nashville, Tenn.	40.0	21	17.2	7	5.8	11.4
Tennessee River.						
Chattanooga, Tenn.	33.0	10	11.5	7	5.3	6.2
Knoxville, Tenn.	29.0	9	6.5	5, 28, 29	2.3	4.2
Monongahela River.						
Pittsburg, Pa.	29.0	21	13.0	1	3.4	9.6
Savannah River.						
Augusta, Ga.	32.0	22	25.6	6	8.5	17.1
Willamette River.						
Portland, Oregon	15.0	1	4.5	9	1.7	2.8
Susquehanna River.						
Harrisburg, Pa.	17.0	28	5.0	14	1.1	3.9
Alabama River.						
Montgomery, Ala.	48.0	1	15.2	7, 8	5.5	9.4

* River frozen.

† For 23 days.

‡ For 27 days.

ATMOSPHERIC ELECTRICITY.

THUNDERSTORMS.

Description of the more severe thunderstorms reported for the month is given under "Local storms."

Thunderstorms were reported as follows: East of the Rocky Mountains they were reported in the greatest number of states, 11, on the 6th and 7th; in 9 on the 14th and 19th; in 6 on the 18th and 24th; in 5 on the 11th, 20th, and 28th; in 4 on the 4th, 13th, 23d, and 27th; in 3 on the 2d, 8th, and 9th; in 2 on the 15th, 21st, and 29th; and in 1 on the 1st, 3d, 12th, 16th, 17th, 22d, 25th, and 26th. No thunderstorms were reported on the 5th and 10th.

East of the Rocky Mountains thunderstorms were reported on the greatest number of dates, 13, in Missouri; on 12 in Texas; on 10 in Kansas; on 6 in Arkansas, Louisiana, Mississippi, Oklahoma Territory, and Tennessee; on 5 in Illinois and North Carolina; on 4 in Florida and Indian Territory; on 3 in Georgia; on 2 in Maryland, Michigan, New York, Pennsylvania, South Carolina, and Virginia; and on 1 in Alabama, Kentucky, Massachusetts, New Jersey, North Dakota, and Wisconsin.

West of the Rocky Mountains thunderstorms were reported in Arizona on the 1st, 3d to 8th, 12th, 13th, 14th, 24th, and 25th; in California on the 6th, 14th, 17th, 23d, and 24th; in Colorado on the 1st, 3d, and 21st; and in New Mexico on the 3d, 26th, and 27th. In states and territories other than those named no thunderstorms were reported.

AURORAS.

Exceptionally brilliant auroral displays were observed generally east of the middle-eastern and northeastern Rocky Mountain slopes and north of the 35th parallel on the 13th. The displays were noted at a number of stations in the morning. In the evening they were observed from 6 to 9 p. m., but occurred principally from 7 to 8 p. m., 75th meridian time. A display was reported at Micco, Fla., in the evening, but was not noted at stations intermediate between that place and the 35th parallel owing, probably, to cloudy weather.

Chart VII shows the limits of the region within which the displays were reported the evening of the 13th, and the period during which they were observed at the several stations. The following shows the more prominent features of the display at selected stations:

Auroral display of February 13, 1892.

Station.	Extent of display.		Remarks.
	Asimuth.	Altitude.	
Portland, Me	Covered 90	15	Color of arch bright red, with flashes to zenith.
Manchester, N. H.	In the NW.		Pink and crimson deepening to bright red, and beams of yellow and green; corona formed.
Northfield, Vt.	110 to 225	60	Rose color, with streamers.
Boston, Mass.	120 to 210	Zenith	Very brilliant at 7.45 p. m.
New York, N. Y.	140 to 220	35	Pale green changing to dull red.
Ithaca, N. Y.	125 to 195	80	Pink changing to red, with shafts of white light.
Philadelphia, Pa.	158 to 203		Brilliant red west of low arch of straw color.
Blue Knob, Pa.	135 to 180		Mass of red, with white arches and a red arch.
Baltimore, Md.	120 to 180	30	Varying brilliancy.
Washington, D. C.	135 to 215	30	Bright rosy red to deep crimson, with grayish bands, and streamers inclining slightly to northward.
Lynchburgh, Va.	155 to 205		An arch of red tinged with purple resting on a dark segment.
Charlotte, N. C.	95 to 105	25	Deep red, fan-shaped, with shafts of yellow.
Micco, Fla.	135 to 225	25	Arch of pale light changing to pink. Obscured by clouds at 7.30 p. m.
Parkersburgh, W. Va.	In the N.		Brilliant rose-colored streamers shot up from dark segment.
Cincinnati, Ohio.			Dull red glow in north obscured by clouds.
Cleveland, Ohio.	135 to 190	55	Color deep green to altitude 25°, with beams of bright corn color to altitude 55°.
Vevay, Ind.			Red and yellow streamers to the zenith.
Chicago, Ill.	135 to 225	55	Pink to deep red, with broad rays of white shooting upward.
Lexington, Ky.	155 to 192	46	Pale red, with white bands. Red in northwest.
Louisville, Ky.		30	Brilliant crimson.
Nashville, Tenn.	165 to 195	45	Rose color. Obscured by clouds.
Detroit, Mich.	In the NW.	90	Pink to crimson, with streamers to the zenith.
Port Huron, Mich.	90 to 270		Delicate pink to deep red, with white rays.

Auroral display of February 13, 1892—Continued.

Station.	Extent of display.		Remarks.
	Asimuth.	Altitude.	
Sault de Ste. Marie, Mich.	120 to 240	80	Dark red changing to pink.
Marquette, Mich.	90 to 180	90	Diffused light changing to rose red.
Grand Haven, Mich.	90 to 270	85	Rose red arch on dark segment, with white and pale pink streamers.
Milwaukee, Wis.	90 to 270	70	Dingy red changing to deep pink.
Saint Paul, Minn.	90 to 180	85	Purple glow resting on dark segment.
Saint Vincent, Minn.	90 to 270	90	Belt of red, with white streamers moving from west to east.
Duluth, Minn.	In the N.	90	Bright pink color.
Davenport, Iowa.	150 to 220	60	Bright purple to rosy red, with luminous beams and "merry dancers."
Saint Louis, Mo.	In the N.	30	Red changing to scarlet.
Huron, S. Dak.	90 to 215	90	Bright rose, with lighter beams.
Bismarck, N. Dak.	110 to 250	50	Reddish tint, with bright streamers.
Fort Assinaboine, Mont.	135 to 280		Occurred in morning. Parallel beams of purple and red.

Auroras were also reported as follows: 24th, in the Dakotas, Iowa, Wisconsin, and east New England. 25th, in east Montana, the Dakotas, Iowa, and Wisconsin. 26th, in east Montana, the Dakotas, Iowa, Wisconsin, Upper Michigan, and east New England. 29th, in east Montana, the Dakotas, Minnesota, Iowa, Wisconsin, and Upper Michigan. Auroras were noted along the trans-Atlantic steamship tracks east of the 40th meridian from the 14th to 17th. From the 22d to 28th, between N. 58°, W. 37° and N. 52°, W. 36°, nightly displays resembling a subdued twilight were reported. A white arch of altitude 25° to 30°, with streamers to altitude 45° generally appeared. The arch rested on a dark segment and stars were visible below, through, and above the arch. Auroras were also observed along the steamship tracks between the 30th and 50th meridians from the 24th to 27th.

STATE WEATHER SERVICES.

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for February, 1892, of the directors of the various state weather services:

ALABAMA.

Temperature.—The mean was 3.5 above the normal; maximum, 83, at Daphne, 4th and 23d; minimum, 18, at Valley Head, 13th; greatest monthly range, 53, at Healing Springs; least monthly range, 34, at Citronelle.

Precipitation.—The average was 1.55 below the normal; greatest monthly, 3.91, at Maysville; least monthly, 1.12, at Bermuda.

Wind.—Prevailing directions, northeast and southeast.—P. H. Mell, Observer, Weather Bureau, Auburn, director.

ARIZONA.

The month has been favorable for agricultural and cattle interests.

Temperature.—Maximum, 89, at Fort Mohave, 21st; minimum, 7, at Holbrook and Payson, 10th; greatest monthly range, 59, at Payson; least monthly range, 30, at Gila Bend.

Precipitation.—Greatest monthly, 5.34, at Farleys Camp; least monthly, 0.03, at Buckeye.

Wind.—Prevailing direction, west.—J. C. Hayden, Observer, Weather Bureau, Tucson, director.

ARKANSAS.

Temperature.—The mean was 5.2 above the normal; maximum, 78, at Texarkana, 7th; minimum, 18, at Rogers, 16th; greatest monthly range, 53, at Keesees Ferry; least monthly range, 32, at Newport.

Precipitation.—The average was 1.29 below the normal; greatest monthly, 6.50, at Madding; least monthly, 1.24, at Keesees Ferry.

Wind.—Prevailing direction, north.—M. F. Locke, Commissioner of Agriculture, Little Rock, director; F. H. Clarke, Observer, Weather Bureau, assistant.

CALIFORNIA.

Temperature.—The mean was 1.4 above the normal; maximum, 88, at Davisville and Claremont, 11th and 24th; minimum, 11, at Susanville, 9th; greatest monthly range, 50, at Winchester; least monthly range, 28, at Berkeley.

Precipitation.—The average was 0.46 below the normal; greatest monthly, 8.44, at Georgetown; least monthly, trace, at Citrus.

Wind.—Prevailing direction, west.—J. A. Barwick, Observer, Weather Bureau, Sacramento, director.

COLORADO.

Temperature.—The mean was 1.0 above the normal; maximum, 78, at Thon, 22d; minimum, —20, at Steamboat Springs, 25th; greatest monthly range, 76, at Thon; least monthly range, 39, at Fruita.

Precipitation.—The average was 0.30 above the normal; greatest monthly, 4.50, at Cumbres; least monthly, 0.04, at Lamar.

Wind.—Prevailing direction, west.—W. S. Miller, Observer, Weather Bureau, Denver, director.

FLORIDA.

Temperature.—Maximum, 89, at Manatee, 7th; minimum, 27, at Archer, 13th; greatest monthly range, 55, at Archer; least monthly range, 25, at Key West.

Precipitation.—Greatest monthly, 4.20, at Hypoluxo; least monthly, 0.24, at Ocala.

Wind.—Prevailing direction, northeast.—E. R. Demain, Observer, Weather Bureau, Jacksonville, director.

GEORGIA.

Temperature.—Maximum, 82, at Quitman, 8th; minimum, 18, at Diamond, 13th; greatest monthly range, 53, at Americus; least monthly range, 34, at Monticello.

Precipitation.—Greatest monthly, 5.98, at La Grange; least monthly, 1.93, at Hephzibah.

Wind.—Prevailing direction, northeast.—Park Morrill, Local Forecast Official, Weather Bureau, Atlanta, director.

ILLINOIS.

Temperature.—The mean was 4.9 above the normal of the last 17 years; maximum, 72, at Golconda, 24th; minimum, —3, at Lanark, 15th.

Precipitation.—The average was 0.35 below the normal; greatest monthly, 5.05, at Centralia; least monthly, 0.60, at Hennepin.

Wind.—Prevailing direction, northwest.—John Craig, Observer, Weather Bureau, Springfield, director.

INDIANA.

Temperature.—The mean was 5.0 above the normal; maximum, 70, at Marengo, 24th; minimum, 2, at Angola, 16th; greatest monthly range, 57,

at Connersville; least monthly range, 40, at De Gonia Springs.

Precipitation.—The average was 0.27 below the normal; greatest monthly, 9.25, at Huntingburgh; least monthly, 1.64, at Michigan City.

Wind.—Prevailing direction, northwest.—*Prof. H. A. Huston, La Fayette, director; C. F. R. Wappenhans, Local Forecast Official, Weather Bureau, assistant.*

IOWA WEATHER AND CROP SERVICE.

Temperature.—The mean was 6.0 above the normal; maximum, 68, at Glenwood, 17th; minimum, —20, at Bancroft, 15th; greatest monthly range, 68, at Glenwood; least monthly range, 41, at Winterset.

Precipitation.—The average was slightly below the normal; greatest monthly, 2.18, at Cedar Rapids; least monthly, 0.12, at Elkader.

Wind.—Prevailing direction, northwest.—*J. R. Sage, Des Moines, director; G. M. Chappel, Local Forecast Official, Weather Bureau, assistant.*

KANSAS.

Temperature.—The mean was 4.7 above the normal; maximum, 80, at Shields, 1st; minimum, —2, at Leoti, 8th and 9th; greatest monthly range, 79, at Shields; least monthly range, 45, at Independence.

Precipitation.—The average was 2.14 above the normal; greatest monthly, 7.11, at Fort Scott; least monthly, 0.25, at Weskau.

Wind.—Prevailing direction, north.—*Prof. J. T. Lovewell, Topeka, director; T. B. Jennings, Observer, Weather Bureau, assistant.*

KENTUCKY.

Temperature.—The mean was about 3.0 above the normal; maximum, 70, at Bowling Green, 24th; minimum, 11, at Lexington and Springfield, 12th; greatest monthly range, 57, at Springfield; least monthly range, 32, at Richmond.

Precipitation.—The average was nearly 2.00 below the normal; greatest monthly, 4.50, at Caddo; least monthly, 1.75, at South Fork.

Wind.—Prevailing direction, southwest.—*Frank Burke, Observer, Weather Bureau, Louisville, director.*

LOUISIANA.

Temperature.—The mean was 4.3 above the normal; maximum, 81, at Luling, 8th and 20th; minimum, 25, at Winnsborough, 12th; greatest monthly range, 54, at Winnsborough; least monthly range, 26, at Port Eads.

Precipitation.—The average was 1.97 below the normal; greatest monthly, 6.75, at Monroe; least monthly, 0.04, at New Orleans.

Wind.—Prevailing direction, northeast.—*George E. Hunt, Local Forecast Official, Weather Bureau, New Orleans, director.*

MARYLAND.

Temperature.—Maximum, 64, at Cumberland (b), 1st; minimum, —8, at Baetcheville, 6th; greatest monthly range, 68, at Baetcheville; least monthly range, 38, at Leonardtown.

Precipitation.—Greatest monthly, 4.07, at Solomons; least monthly, 1.56, at Great Falls.

Wind.—Prevailing direction, northeast.—*Dr. William B. Clark, Johns Hopkins University, Baltimore, director; Prof. Milton Whitney, Maryland Agricultural College, secretary and treasurer; C. P. Cronk, Observer, Weather Bureau, in charge.*

MICHIGAN.

Temperature.—Maximum, 59, at Mottville, 24th; minimum, —24, at Cheboygan, 13th; greatest monthly range, 70, at Standish; least monthly range, 35, at Fairview.

Precipitation.—Greatest monthly, 3.67, at Berlin; least monthly, 0.76, at Standish.

Wind.—Prevailing direction, southeast.—*E. A. Evans, Local Forecast Official, Weather Bureau, Detroit, director.*

MISSISSIPPI.

Temperature.—The mean was 3.7 above the normal; maximum, 80, at Port Gibson, 6th, and at Hattiesburgh, 6th, 7th, and 8th; minimum, 28, at Louisville, 17th, and at Enterprise, 12th; greatest monthly range, 51, at Port Gibson and Enterprise; least monthly range, 31, at Ship Island.

Precipitation.—The average was 2.49 below the normal; greatest monthly, 5.81, at Waynesborough; least monthly, 0.18, at Natchez.

Wind.—Prevailing directions, north and northeast.—*R. B. Fulton, Observer, Weather Bureau, University, director.*

MISSOURI.

The month was remarkable for high temperature, excess in rainfall, and the large number of cloudy days.

Temperature.—The mean was 6.3 above the normal; maximum, 71, at Oak Ridge, 24th; minimum, 2, at Harris, 15th; greatest monthly range, 57, at Adrian; least monthly range, 38, at Gordonville.

Precipitation.—The average was 1.96 above the normal; greatest monthly, 8.83, at Appleton City; least monthly, 1.28, at Harris.

Wind.—Prevailing direction, northwest.—*Levi Chubbuck, Secretary of State Board of Agriculture, Columbia, director; J. H. Smith, Observer, Weather Bureau, assistant.*

MONTANA.

Temperature.—The mean was 7.0 above the normal; maximum, 66, at Choteau, 26th; minimum, —24, at Fort Buford, 14th.

Precipitation.—The average was slightly below the normal; greatest monthly, 1.36, at Martinsdale; least monthly, 0.02, at Boulder.—*E. J. Glass, Observer, Weather Bureau, Helena, director.*

NEBRASKA.

Temperature.—Maximum, 71, at Belvidere, 25th; minimum, —10, at North Loup, 8th, and at Fort Niobrara, 15th; greatest monthly range, 78, at Fort Niobrara; least monthly range, 40, at Falls City.

Precipitation.—Greatest monthly, 3.51, at Minden; least monthly, 0.17, at York.

Wind.—Prevailing direction, northwest.—*Prof. Goodwin D. Swezey, Crete, director; G. A. Loveland, Observer, Weather Bureau, assistant.*

NEVADA.

Temperature.—The mean was 0.1 below the normal; maximum, 65, at Hawthorne, 28th, and at South Camp, 27th; minimum, —18, at Halleck, 8th; greatest monthly range, 76, at Halleck; least monthly range, 19, at Austin.

Precipitation.—The average was 0.18 below the normal; greatest monthly, 3.77, at Palmetto; least monthly, 0.12, at Halleck.

Wind.—Prevailing direction, south.—*Prof. Charles W. Friend, Carson City, director; F. A. Carpenter, Observer, Weather Bureau, assistant.*

NEW ENGLAND METEOROLOGICAL SOCIETY.

Temperature.—The mean was 1.8 above the normal; maximum, 54, at Lake Cochituate, 19th; minimum, —26, at West Milan, 17th; greatest monthly range, 74, at West Milan; least monthly range, 32, at Provincetown.

Precipitation.—The average was 1.66 below the normal; greatest monthly, 5.20, at Calais; least monthly range, 0.50, at Cornwall.

Wind.—Prevailing direction, northwest.—*Prof. William H. Niles, Boston, Mass., president; Prof. Winslow Upton, Providence, R. I., secretary; J. Warren Smith, Observer, Weather Bureau, assistant.*

NEW JERSEY.

Temperature.—The mean was 2.0 above the normal; maximum, 58, at Trenton and Lancewood, 8th; minimum, 7, at Deckertown, Dover, and Newton, 14th; greatest monthly range, 51, at Dover; least monthly range, 37, at Newark and Oceanic.

Precipitation.—The average was 1.83 below the normal; greatest monthly, 3.62, at Freehold; least monthly, 0.67, at Junction.

Wind.—Prevailing direction, northwest.—*E. W. McGann, Observer, Weather Bureau, New Brunswick, director.*

NEW MEXICO.

Temperature.—The mean was slightly above the normal; maximum, 73, at La Luz, 23d; minimum, —7, at Dulce, 11th; greatest monthly range, 67, at Folsom; least monthly range, 39, at Albuquerque.

Precipitation.—The average was considerably above the normal; greatest monthly, 3.95, at Chama; least monthly, 0.13, at Antelope Springs.

Wind.—Prevailing direction, west.—*H. B. Hersey, Observer, Weather Bureau, Santa Fe, director.*

NEW YORK.

Temperature.—The mean was 1.4 above the normal; maximum, 55, at Rome, 23d; minimum, —17, at Madison Barracks, 6th, and at Canton, 17th; greatest monthly range, 70, at Rome; least monthly range, 32, at Fort Columbus.

Precipitation.—The average was 0.45 below the normal; greatest monthly, 5.42, at Cherry Creek; least monthly, 0.19, at Au Sable Forks.

Wind.—Prevailing direction, northwest.—*Prof. E. A. Fuytes, Dean of the College of Civil Engineering, Cornell University, Ithaca, director; R. M. Hardinge, Observer, Weather Bureau, assistant.*

NORTH CAROLINA.

Temperature.—The mean was 1.3 below the normal; maximum, 72, at Asheville, 22d; minimum, 12, at Pittsborough, 13th; greatest monthly range, 54, at Concord and Chapel Hill; least monthly range, 36, at Hatteras.

Precipitation.—The average was 0.88 below the normal; greatest monthly, 7.12, at Hatteras; least monthly, 1.30, at Mount Airy.

Wind.—Prevailing direction, northeast.—*Dr. Herbert B. Battle, Raleigh, director; C. F. von Herrmann, Observer, Weather Bureau, assistant.*

NORTH DAKOTA.

Temperature.—The mean was 4.3 below the normal; maximum, 62, at Medora, 25th; minimum, —41, at Willow City, 15th; greatest monthly range, 83, at Jamestown, least monthly range, 58, at Napoleon.

Precipitation.—The average was 0.02 below the normal; greatest monthly, 1.15, at Saint John; least monthly, 0.25, at Grafton.

Wind.—Prevailing direction, northwest.—*W. H. Fallon, Observer, Weather Bureau, Bismarck, director.*

OHIO.

Temperature.—The mean was 4.0 above the normal; maximum, 74, at Portsmouth, 23d; minimum, —1, at McConnellsville, 6th, and at Granville, 6th.

Precipitation.—The average was 0.82 below the normal; greatest monthly, 6.20, at Piqua; least monthly, 1.08, at Pomeroy.

Wind.—Prevailing direction, south.—*Prof. B. F. Thomas, Columbus, director; C. M. Strong, Observer, Weather Bureau, secretary and assistant.*

OKLAHOMA.

Temperature.—Maximum, 80, at Mangum, 10th; minimum, 10, at Fort Supply, 8th; greatest monthly range, 62, at Fort Supply; least monthly range, 46, at Guthrie.

Precipitation.—Greatest monthly, 5.14, at Keokuk Falls; least monthly, 0.24, at Mangum.

Wind.—Prevailing direction, north.—*Louis Dorman, Observer, Weather Bureau, Oklahoma City, director.*

PENNSYLVANIA.

Temperature.—The mean was 3.0 above the normal; maximum, 62, at Pittsburg, 25th; minimum, —18, at Saegerstown, 13th; greatest monthly range, 71, at Saegerstown; least monthly range, 37, at Swarthmore.

Precipitation.—Greatest monthly, 4.48, at Blue Knob; least monthly, 0.43, at Swarthmore.

Wind.—Prevailing direction, northwest.—*Under direction of the Franklin Institute, Philadelphia; H. L. Ball, Observer, Weather Bureau, assistant.*

SOUTH CAROLINA.

Temperature.—Maximum, 73, at Charleston, 15th; minimum, 18, at Winnsborough, 12th.

Precipitation.—Greatest monthly, 6.04, at Evergreen.

Wind.—Prevailing directions, northwest and southwest.—*A. P. Butler, Observer, Weather Bureau, Columbia, director.*

SOUTH DAKOTA.

Temperature.—The mean was 1.3 above the normal; maximum, 61, at Cross, 21st; minimum, —26, at Webster, 15th; greatest monthly range, 73, at Clark, Watertown, and Webster; least monthly range, 54, at Parkston.

Precipitation.—The average was 0.06 above the normal; greatest monthly, 1.52, at Mitchell; least monthly, 0.03, at Aberdeen.

Wind.—Prevailing direction, northwest.—*S. W. Glenn, Local Forecast Official, Weather Bureau, Huron, director.*

TENNESSEE WEATHER CROP SERVICE.

Temperature.—The mean was 2.0 below the normal; maximum, 71, at Memphis, 24th; minimum, 16, at Johnson City, 7th; greatest monthly range, 50, at Dunlap; least monthly range, 29, at Missionary Ridge.

Precipitation.—The average was 2.08 below the normal; greatest monthly, 5.44, at Sharp; least monthly, 1.51, at Andersonville.—*J. B. Marbury, Local Forecast Official, Weather Bureau, Nashville, director.*

TEXAS.

Temperature.—The mean was 9.1 above the normal; maximum, 89, at Brownsville, 11th; minimum, 13, at Dallas, 12th; greatest monthly range, 70, at Dallas; least monthly range, 28, at Galveston.

Precipitation.—The average was 0.46 below the normal; greatest monthly, 5.05, at Palestine; least monthly, 0.00, at Sugar Land.—*D. D. Bryan, Galveston, director; I. M. Cline, Local Forecast Official, Weather Bureau, assistant.*

UTAH.

Temperature.—Maximum, 73, at Moab, 20th; minimum, —13, at Loa, 9th; least monthly range, 33, at Snowville.

Precipitation.—Greatest monthly, 1.52, at Ogden; least monthly, 0.20, at Soldiers Summit.—*G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.*

VIRGINIA.

Temperature.—Maximum, 74, at Richmond, 2d and 3d; minimum, —8, at Dale Enterprise, 6th; greatest monthly range, 71, at Dale Enterprise; least monthly range, 38, at Birdsnest.

Precipitation.—Greatest monthly, 5.32, at Norfolk; least monthly, 1.32, at Blacksburg.

Wind.—Prevailing direction, northeast.—*Dr. E. A. Craighill, Lynchburg, director; J. N. Ryker, Observer, Weather Bureau, assistant.*

WASHINGTON.

Temperature.—The mean was 3.7 above the normal; maximum, 65, at Seattle, 27th, and at Vancouver, 24th; minimum, 4, at Waterville, 5th and 6th; greatest monthly range, 46, at Coulee City and Fort Spokane; least monthly range, 16, at Tutuosh Island.

Precipitation.—The average was 2.35 below the normal; greatest monthly, 6.79, at Neah Bay; least monthly, 0.11, at Vashon.

Wind.—Prevailing direction, south.—*E. B. Olney, Observer, Weather Bureau, Olympia, director.*

WEST VIRGINIA.

Temperature.—Maximum, 72, at Elizabeth, 1st; minimum, —12, at Beverly, 6th; greatest monthly range, 73, at Moorefield; least monthly range, 49, at Wheeling.

Precipitation.—Greatest monthly, 3.17, at Parkersburg; least monthly, 0.98, at Nuttallburgh.

Wind.—Prevailing direction, west.—*W. W. Dent, Observer, Weather Bureau, Parkersburg, director.*

WISCONSIN.

Temperature.—The mean was about 5.0 above the normal; maximum, 57, at Prairie du Chien, 25th; minimum, —34, at Butternut, 18th, and at Hayward, 16th; greatest monthly range, 82, at Butternut; least monthly range, 36, at Cadiz.

Precipitation.—The average was about normal; greatest monthly, 3.15, at Embarrass; least monthly, 0.75, at Delavan.

Wind.—Prevailing direction, northwest.—*W. L. Moore, Local Forecast Official, Weather Bureau, Milwaukee, director.*

WYOMING.

Temperature.—Maximum, 77, at Casper, 25th; minimum, —34, at La Barge, 8th; greatest monthly range, 92, at La Barge; least monthly range, 44, at Atlantic City.

Precipitation.—Greatest monthly, 1.17, at Cheyenne; least monthly, 0.00, at Bitter Creek.

Wind.—Prevailing direction, west.—*E. M. Ravenscraft, Observer, Weather Bureau, Cheyenne, director.*

CONTRIBUTIONS AND ORIGINAL ARTICLES.

MEAN HEIGHTS AND VELOCITIES OF THE DIFFERENT CLOUD FORMS.

(Measured at Blue Hill Observatory, Mass.)

The following tables show the mean heights and velocities of the different forms of clouds in summer, winter, and for the year. These tables were prepared from records of the Observatory by Mr. H. H. Clayton, local forecast official, Weather Bureau, by permission of Mr. A. Lawrence Rotch, F. R. M. S., proprietor of the Blue Hill Meteorological Observatory.

SUMMER.

Name of cloud.	Number of clouds.	Height in feet.			Velocity in miles.		
		Mean.	Max.	Min.	Mean.	Max.	Min.
Cirrus	42	32,557	48,984	17,691	63.8	136	10
Cirro-stratus	20	26,392	39,810	7,513	55.0	153	4
Cirro-cumulus	29	17,720	39,534	7,513	36.2	87	11
Upper cumulus	13	6,572	16,919	3,636	21.0	37	6
Cumulus	104	4,833	11,752	1,972	19.5	46	5
Cumulo-stratus	12	5,177	9,029	3,051	21.3	60	15
Stratus	20	2,513	6,726	394	.....	.....	.....
Nimbus	27	2,330	5,643	213	.....	.....	.....
Scud	14	2,556	3,983	1,099	15.4	33	4

WINTER.

Name of cloud.	Number of clouds.	Height in feet.			Velocity in miles.		
		Mean.	Max.	Min.	Mean.	Max.	Min.
Cirrus	28	26,414	37,926	12,349	114.3	231	28
Cirro-stratus	7	19,292	27,926	22,386	69.3	127	46
Cirro-cumulus	8	16,280	28,117	14,997	80.1	183	40
Cumulus	26	4,531	8,825	1,745	32.0	57	7
Cumulo-stratus	6	3,703	6,752	984	28.9	47	14
Stratus	14	3,012	9,613	394	.....	.....	.....
Scud	3	1,722	2,434	984	23.9	27	21

Mean heights and velocities of different cloud forms—Continued.

YEAR (mean of summer and winter).

	Cirrus.	Cirro-stratus.	Cirro-cumulus.	Cumulus.	Cumulo-stratus.	Stratus.	Nimbus.	Scud.
Number of clouds	70	27	37	130	18	34	27	17
Mean height	29,485	22,841	16,998	4,682	4,472	2,762	2,336	2,139
Maximum height	48,984	39,810	39,534	11,752	9,029	9,613	5,643	3,983
Minimum height	12,394	7,513	7,513	1,745	984	394	213	984
Mean velocity	89.0	62.2	58.2	25.7	25.1	.....	.....	19.6
Maximum velocity	231	153	183	57	60	.....	.....	33
Minimum velocity	10	4	11	5	14	.....	.....	4

NOTE.—The forms of cloud to which the names in this table apply are defined in the General Instructions to Observers of the Weather Bureau.

SOME OBSERVATIONS OF WIND DIRECTION AT DIFFERENT ALTITUDES AROUND WEST INDIA CYCLONES.

Some very interesting observations of the difference in direction of upper and lower air currents in the vicinity of the centers of West India cyclones were made by the Weather Bureau observer, Mr. H. B. Boyer, at Key West, Fla., in 1891. The direction of the current was determined by the motion of clouds, the observations being made with a nephoscope.

The winds at the surface of the earth in the vicinity of a cyclone blow round the center in the Northern Hemisphere in a direction contrary to the direction of motion of the hands of a watch held with the face uppermost. The direction of motion is inclined in toward the center of the cyclone. With increasing height in the air the direction of the air current is not so much

toward the center, the central tendency constantly diminishing with height, and at a great height it is out from the center.

In the case of a cyclone center southeast of an observer, for instance, the wind at the surface of the earth being from the north-northeast, the low cumulus, cumulo-stratus, and stratus clouds will be moving from the northeast; the high cumulus from the east-northeast; the cirro-stratus from the east; the cirro-cumulus from the east-southeast; and the high cirrus from the south.

The relations of the motions of the air for different altitudes have never been very exactly observed and are in fact even partially surmised. Direct observations of these motions are of great practical value in meteorology.

Air pressure observations by means of the barometer are now mainly relied upon as indicating the approach of cyclones.

With exact observations of the differences in direction of air currents at different heights, and the changes in direction as observed in a large number of cases in the vicinity of cyclone centers, it would probably be possible to formulate rules by means of which some idea could be formed from the observed differences in direction and the changes what the probable motion of the center of the cyclone was going to be. This would be of the greatest importance in weather predictions, enabling the predictor to better foretell the direction and force of any coming hurricane winds that might be anticipated. Knowledge of this kind is more especially important in the case of ships at sea. A ship's course can be so regulated as to avoid a cyclone center when the position and direction of motion of the center are known.

The following are the observations of the directions of air currents at Key West, Fla., the approximate distances of cyclone centers from the place at the time, and the estimates of direction of motion of their centers, as shown by the storm-tracks given in the MONTHLY WEATHER REVIEW:

Direction from which air currents moved at Key West, Fla., 1891.
[Lat. 24° 34' N., Long. 81° 49' W.]

	Aug. 21, 4 to 6 p. m.	Sept. 19, 4:30 p. m.	Sept. 20, 7:30 a. m.	Oct. 6, 8 a. m.
Wind at surface of earth	nnw.	e.	e.	ne.
Cumulus clouds	n.	e.	e.	ne.
Cumulo-stratus clouds	e.	e.	e.	ne.
Cirro-stratus clouds	e.	e.	e.	ne.
Cirrus clouds	e.	e.	e.	ne.
Cyclone center from Key West in miles.	e. 800 s. 400	w. 200 s. 200	w. 350 n. of s., zero	w. 100 s. 300
Barometric pressure at cyclone center, inches	29.0			29.7
Motion of center of cyclone	e. to w.	se. to nw.	se. to nw.	sw. to ne.

Direction from which air currents moved at Key West, Fla., 1891—Cont'd.

	Oct. 6, 4:20 p. m.	Oct. 7, 10 a. m.	Oct. 9, 8 a. m.	Oct. 10, 10 a. m.
Wind at surface of earth	ese.	sw.	ese.	ese.
Cumulus clouds	se.	sw.	s.	s.
Cumulo-stratus clouds	sw.	w.	sw.	sw.
Cirrus clouds	sw.			
Cyclone center from Key West in miles.	e. 100 n. 150	w. 100 n. 100	e. 100 n. 100	e. 100 n. 400
Barometric pressure at cyclone center, inches		29.9		29.8
Motion of center of cyclone	sw. to ne.	sw. to ne.	sw. to ne.	sw. to ne.

METEOROLOGICAL TABLES.

Meteorological record of Army post surgeons, voluntary, and other co-operating observers, February, 1892.

Stations.	Temperature. (Fahrenheit.)				Precip'n.	Stations.	Temperature. (Fahrenheit.)				Precip'n.
	Max.	Min.	Mean.				Max.	Min.	Mean.		
Alabama.						Arizona—Cont'd.					
Birmingham	71	31	51.6	1.12		Florence	79	31	55.0	2.29	
Bessemer	69	24	46.2	1.88		Fort Apache	65	11	40.9	2.29	
Brewton	76	27	51.7	4.40		Fort Bowie	72	26	46.8	3.36	
Carrollton	70	32	51.6	1.91		Fort Grant	72	21	47.6	1.59	
Childersburg	71	37	57.6	2.65		Fort Huachuca	67	21	46.3	1.59	
Citronelle	71	37	57.6	1.82		Fort Mohave	89	32	57.7	1.74	
Claiborne Landing				2.15		Gila Bend	76	46	58.6	2.30	
Cordova				3.50		Gila Bend	86	42	66.4	2.46	
Daphne	83	31	61.2	1.21		Grand Central Mill.				0.67	
Decatur				5.31		Holbrook	63	17	39.0	0.90	
Double Springs	62	29	45.6	5.04		Lochiel	67	30	49.2	2.90	
Florence				5.58		Maricopa	98	40	64.3	2.44	
Gadsden				3.22		Mount Huachuca	67	19	44.8	2.64	
Geneva	77	30	57.3	1.97		Natural Bridge				4.19	
Greensborough	75	34	55.7	2.86		Navajo Springs				0.78	
Healing Springs	79	26	57.6	2.70		New River	77	33	53.5	3.95	
Jasper	68	32	47.8	2.55		Oracle	67	26	45.7		
Jemison	68	32	54.2	3.00		Oro				1.16	
Livingston	75	31	52.0	2.43		Pantano	83	29	53.3	3.75	
Lynn				4.44		Payson	66	7	39.5	4.10	
Maysville	64	26	47.3	5.91		Peoria	79	35	55.6	2.77	
Mt. Vernon B'ks.	76	33	57.4	2.71		Phoenix	80	32	55.4	2.34	
Mount Willing	71	30	55.1	1.63		Red Rock	80	40	61.3	2.76	
Newburgh	72	27	51.0	5.48		Reymert	75	31	51.8	4.14	
Newton	76	26	50.7	3.70		Saint Johns				0.28	
Oxanna	68	26	50.4	2.45		San Carlos	82	27	51.2	3.51	
Pittsborough	78	36	57.8			San Simon	84	30	54.5	1.09	
Pushmataha	74	30	54.0	4.20		Signal	77	33	53.4	2.97	
Selma				5.02		Strawberry				3.63	
Scottsboro	70	22	46.6	4.29		Teviston				0.50	
Sturdevant				4.75		Texas Hill	85	41	56.9		
Talladega				3.85		Tucson	76	32	53.0	2.54	
Talladega Falls				4.14		Tucson	74	30	49.8	3.50	
Tuscaloosa	72	28	49.8	2.50		Walnut Grove				3.10	
Tusculum	69	29	48.4	2.82		Walnut Ranch	70	17	44.0	2.19	
Union Springs	76	28	50.7	2.73		Whipple Barracks	70	0	36.6	1.64	
Uniontown	73	30	54.0	3.94		Willcox	80	34	54.7	1.45	
Valley Head	66	18	44.4	2.62		Willgua				1.75	
Wiggins	74	25	56.4	2.41		Winslow	70	20	42.1	1.20	
Alaska.						Woodruff				1.30	
Killisnoo	41	10	29.9	7.30		Yuma	83	40	61.9	0.87	
Metlakatla	52	21	35.9	6.44		Arkansas.					
Arizona.						Arkadelphia				3.95	
Antelope Valley				3.76		Arkansas City				5.14	
Ariz. Can. Co. Dam	83	33	57.2	2.27		Black Rock	70	20	46.6	2.72	
Benson	73	31	49.1	1.30		Brinkley	70	30	51.7	2.90	
Bisbee	70	22	45.4	2.39		Camden	73	31	52.0	4.79	
Buckeye				0.03		Conway	66	29	49.0	2.46	
Calabasas	70	32	49.9	1.73		Corner Stone	70	32	50.3	4.75	
Casa Grande	73	30	54.8			Dallas	70	27	48.1	4.33	
Crittenden	74	33		5.00		Dardanelle				2.25	
Doe Cabezos				2.27		El Dorado	77	30	52.0	4.59	
Dragoon				2.67		Fayetteville	66	21	43.1	2.38	
Dragoon Summit	65	45	48.1	1.83		Forrest City	71	31	53.7	4.51	
Dudleyville	78	32	52.2	2.69		Fulton				3.65	
Farleys Camp	74	30	50.3	5.34		Gaines Landing				4.12	

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Arkansas—Cont'd.	o	o	o	<i>Ins.</i>	California—Cont'd.	o	o	o	<i>Ins.</i>
Harrisburgh†	68	28	44.5	2.95	Chico	76	33	49.6	3.28
Harrison†	68	20	45.2	2.00	Cisco	43	12	32.1	7.61
Helena†				5.00	Citrus	74	23	47.8	T.
Helena b†	70	31	52.6	4.55	Claremont†	68	34	56.6	2.02
Hot Springs	70	25	50.2	3.65	Colfax *1	66	30	46.0	7.55
Lead Hill	74	21		1.24	Colton *1	72	36	54.9	3.36
Lonoke *1	76	31	53.0	2.68	Corning	74	33	52.2	1.35
Luna Landing	72	34	53.0	3.55	Crescent City				3.44
Madding	68	32	51.6	6.50	Crescent City L. H.				3.11
Malvern†	71	25	49.9	3.31	Davisville a *1	68	39	53.0	2.05
Marshall†	68	21	46.6	2.28	Davisville b	68	38	58.5	1.86
Mount Nebo†	65	24	45.2	2.80	Delano *1	72	38	54.5	0.85
Newport a†				2.83	Delta *1	74	28	50.1	4.61
Newport b†	62	30	48.0	4.46	Downey *1	68	40	60.0	2.42
Oacoma†	68	23	46.3	4.46	Drytown	68	31	50.3	3.75
Oark†	66	25	50.3	2.45†	Duarte	76	36	56.0	2.94
Ozone†	62	23	43.8	4.64	Dunnigan *1	66	32	48.7	2.25
Paragould†	68	23	48.4	2.38	Dunsmuir *1	63	24	43.2	3.31
Pine Bluff†	72	30	53.2	5.32	East Brother L. H.				1.52
Rogers†	66	18	42.2	1.36	Edgewood *1	58	27	39.5	0.12
Stuttgart†	71	28	51.6	5.06	El Casco *1	72	30	46.0	
Texarkana†	78	29	54.2		El Dorado *1	70	33	53.5	5.75
Washington *1	70	35	53.0		Elmira *1	74	34	51.8	4.04
Winslow *†1	65	21	46.8	2.81	El Verano *1	68	35	51.6	4.61
California.					Emigrant Gap *1	50	21	37.3	7.46
Agnew†	69	31	50.6	0.89	Esparto	74	34	54.2	2.28
Alcalde *1	72	38	53.5	0.94	Evergreen				1.36
Alcatraz Island	66	42	51.1	2.81	Farmington *1	71	33	54.3	2.20
Almaden *1	67	33	52.7	1.75	Felton *1	78	29	51.2	11.13
Alvarado†	73	36	54.8	0.81	Fernando *1	79	32	49.5	2.53
Anaheim†	74	40	55.1	2.35	Florence *1	76	40	53.9	2.47
Angel Island.	72	36	52.4	3.07	Florin *5	71	29	52.6	
Antioch *1	67	37	51.3	1.63	Folsom City a *1	75	38	53.5	3.15
Aptos *1	65	30	52.8	4.90	Folsom City b				3.03
Arcata				2.86	Forestville†	73	16	46.0	5.19
Athlone *1	78	31	53.8	1.10	Fort Bidwell	58	10	35.2	1.20
Auburn *1	70	35	52.2	4.91	Fort Gaston	68	27	47.6	1.90
Bakersfield a *1	70	40	53.8	0.45	Fort Mason	65	40	52.3	2.51
Bakersfield b†	75	38	53.9	0.48	Fremont *1	70	36	55.8	0.68
Ballast Point L. H.				2.25	Fruto *1	74	35	53.6	3.53
Beaumont *1	80	30	48.4	3.83	Galt *1	70	33	49.6	1.78
Belmont *1	67	40	53.0		Georgetown†	65	27	46.7	8.44
Benicia Barracks	65	34	50.4	1.98	Gilroy *1	66	30	51.4	1.90
Berendo *1	68	38	53.4	1.67	Girard *1	64	30	45.4	0.30
Berkeley†	66	38	50.9	4.20	Glen Ellen *1	70	30	50.6	6.27
Bishop Creek *1	71	21	46.4	0.70	Goshen *1	71	30	48.9	1.70
Boca *1	50	20	22.2	3.35	Grass Valley a				7.15
Borden *1	70	34	52.1	1.12	Grass Valley b	62	23	44.3	5.92
Boulder Creek *1	71	28	50.8	0.51	Haywards *1	65	36	50.7	1.38
Brentwood *1	70	33	51.9	1.12	Hollister *1	73	32	54.0	1.53
Brighton†	69	28	52.0	2.06	Hornbrook *1	63	25	42.6	0.35
Byron *1	70	34	51.0	1.13	Humboldt L. H.				2.34
Caliente *1	78	40	52.8	1.00	Huron *1	79	35	55.4	1.30
Calistoga *1	77	32	56.0	5.52	Hyde Ranch				2.68
Cape Mendocino L. H.				2.03	Indio *1	80	37	59.5	0.43
Castroville *1	73	39	55.1	3.00	Ione *1	69	27	50.3	2.85
Centerville *1	72		53.8	1.41	Iowa Hill *1	69	31	48.2	5.36

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
California—Cont'd.	o	o	o	Ins.	California—Cont'd.	o	o	o	Ins.
Jackson.....	67	26	44.1	3.03	Santa Ana.....	78	39	58.8	2.36
Julian.....	67	26	44.1	6.69	Santa Barbara.....	71	38	54.7	2.55
Keeler.....	62	24	45.5	0.19	Santa Barbara.....	70	42	56.0	2.48
Keene.....	67	33	47.9	2.22	Santa Barbara L. H.....	.....	.....	.....	.....
Kennedy Gold Mine.....	66	28	47.8	4.61	Santa Clara.....	.....	.....	.....	.....
King City.....	62	32	45.7	1.27	Santa Cruz.....	66	37	52.6	4.79
Kingburg.....	70	35	54.4	1.27	Santa Cruz L. H.....	70	28	52.4	4.60
Knights Landing.....	76	34	52.0	2.38	Santa Margarita.....	67	25	44.8	2.19
Lathrop.....	72	35	53.8	1.76	Santa Maria.....	70	42	53.8	4.40
Laurel.....	69	30	48.8	7.30	Santa Monica.....	68	32	51.1	3.99
Lemoore.....	73	32	55.4	0.95	Santa Paula.....	68	31	51.5	5.07
Lime Point L. H.....	.....	.....	.....	0.33	Saticoy.....	78	33	53.8	3.96
Livermore.....	70	30	52.8	1.08	Selma.....	76	33	54.8	1.27
Livingston.....	76	32	54.1	1.15	Seven Palms.....	83	41	59.0	0.26
Lodi.....	69	31	53.4	1.81	Shasta.....	62	24	42.8	4.17
Long Beach.....	74	36	57.8	.....	Shingle Springs.....	70	36	52.5	6.43
Los Angeles.....	72	40	54.3	3.21	Sims.....	68	22	44.2	5.29
Los Banos.....	74	34	56.0	1.07	Sisson.....	59	20	40.1	0.66
Los Gatos.....	71	30	51.3	3.60	Soledad.....	70	32	50.7	1.47
Los Gatos.....	68	34	49.4	3.43	Sonoma.....	68	32	49.2	3.57
Mammoth Tank.....	82	33	57.3	0.42	Sonora.....	.....	.....	.....	3.55
Mare Island L. H.....	.....	.....	.....	2.43	Soquel.....	68	32	53.7	.....
Martinez.....	62	32	50.0	3.14	South Vallejo.....	68	35	51.2	2.73
Marysville.....	80	34	55.4	3.77	Spadra.....	79	33	56.3	.....
Menlo Park.....	69	32	52.9	1.39	Steeles.....	70	38	52.6	2.98
Meredot.....	72	33	53.6	0.79	Stockton.....	68	32	52.1	1.25
Milton (near).....	70	37	50.5	1.71	Stockton.....	69	35	54.4	1.73
Modesto.....	85	33	55.8	1.91	Summit.....	43	10	30.0	3.40
Modesto.....	.....	.....	.....	1.72	Suisun City.....	71	38	53.7	2.98
Mohave.....	74	36	48.8	0.47	Susanville.....	67	11	30.9	2.96
Monson.....	74	36	54.2	1.25	Sutter Creek.....	62	26	42.8	2.34
Montague.....	67	33	47.2	.....	Tehachapi.....	58	28	42.9	.....
Monterey.....	68	30	47.5	1.50	Tehama.....	74	37	55.1	1.59
Monterey (Hotel del Monte).....	72	39	53.7	.....	Templeton.....	71	30	51.8	2.12
Mullans.....	.....	.....	.....	2.19	Towles.....	65	24	44.1	7.16
Napa City.....	69	39	50.4	4.82	Tracy.....	72	37	52.1	0.95
Napa City.....	64	32	47.7	3.43	Traver.....	74	31	49.2	1.50
National City.....	74	41	54.6	3.47	Trinidad L. H.....	.....	.....	.....	2.83
Needles.....	80	39	57.2	1.31	Truckee.....	50	0	32.1	2.80
Newark.....	68	35	53.7	1.31	Tulare.....	81	34	54.0	1.47
New Castle.....	66	34	50.0	3.71	Turlock.....	68	35	53.4	1.45
Newhall.....	77	30	51.8	3.02	Turlock.....	78	32	50.6	1.38
Newman.....	72	41	56.6	1.45	Upper Lake.....	75	27	49.2	2.50
Niles.....	68	34	52.7	1.39	Upper Mattole.....	81	34	50.9	5.58
Nordhoff.....	79	50	52.0	2.75	Vacaville.....	70	38	54.7	3.45
Norwalk.....	75	42	55.6	2.43	Vacaville.....	75	40	54.1	3.07
Oakland.....	72	36	50.0	3.68	Valley Springs.....	73	37	53.2	1.75
Oakland.....	62	38	52.6	3.60	Ventura.....	.....	.....	.....	4.54
Ogby.....	88	46	62.5	1.22	Vina.....	75	40	53.2	1.13
Oleta.....	64	29	47.9	4.52	Volcano Springs.....	88	40	60.1	0.59
Ontario.....	75	35	53.3	3.01	Volta.....	66	36	55.0	1.36
Orangevale.....	88	29	51.1	2.96	Walla Walla Ck.....	58	20	39.6	0.47
Orland.....	80	37	53.0	1.93	West Butte.....	64	32	50.0	3.59
Oroville.....	72	37	49.9	3.81	Westley.....	71	40	55.7	1.32
Pajaro.....	70	32	54.0	2.47	Wheatland.....	73	31	51.9	2.55
Palermo.....	70	31	51.8	3.63	Whittier.....	82	40	57.7	3.15
Paso Robles.....	69	29	49.5	1.39	Williams.....	70	30	53.0	1.34
Petaluma.....	68	33	52.2	3.03	Willow.....	69	34	53.0	2.11
Piedras Blancas L. H.....	.....	.....	.....	4.29	Willow.....	72	33	50.3	3.20
Pigeon Point L. H.....	.....	.....	.....	1.10	Winchester.....	81	31	54.7	1.47
Piacerville.....	68	29	48.7	6.83	Winters.....	72	38	55.8	3.13
Pleasanton.....	80	28	52.8	0.99	Woodland.....	66	32	49.3	2.73
Pt. Ano Nuevo L. H.....	.....	.....	.....	3.10	Yerba Buena L. H.....	.....	.....	.....	2.90
Pt. Arena L. H.....	.....	.....	.....	6.55	Yreka.....	64	21	41.8	0.15
Pt. Bonita L. H.....	.....	.....	.....	3.96	Yuba City.....	67	40	53.8	3.48
Pt. Concepcion L. H.....	.....	.....	.....	2.82	Colorado.....	.....	.....	.....	.....
Pt. Fermin L. H.....	.....	.....	.....	2.88	Abbott.....	.....	.....	.....	0.79
Pt. Huene L. H.....	.....	.....	.....	4.50	Agate.....	58	10	32.6	.....
Pt. Montara L. H.....	.....	.....	.....	2.10	Alma.....	39	-10	19.3	0.35
Pt. Pinos L. H.....	.....	.....	.....	2.24	Amherst.....	.....	.....	.....	2.60
Pt. Sur L. H.....	.....	.....	.....	2.66	Antonito.....	47	-3	24.2	0.30
Pomona.....	87	34	52.9	2.25	Arboles.....	48	18	35.0	0.30
Porterville.....	72	33	55.3	1.33	Arboles.....	.....	.....	.....	1.47
Presidio.....	69	31	48.0	2.97	Avoca.....	.....	.....	.....	0.30
Puerto.....	76	38	57.2	1.79	Box Elder.....	.....	.....	.....	1.80
Ravenna.....	79	34	51.8	0.49	Brush.....	.....	.....	.....	0.60
Red Bluff.....	76	30	53.0	3.00	Byers.....	52	1	28.0	0.70
Redding.....	75	34	50.6	1.32	Carson.....	72	-10	11.7	0.85
Redding.....	75	33	52.0	3.52	Castle Rock.....	42	3	33.3	1.30
Redlands.....	.....	.....	.....	53.8	Cheyenne Wells.....	63	4	28.6	0.60
Riverside.....	80	32	53.8	2.60	Chivington.....	.....	.....	.....	0.10
Roe Island L. H.....	.....	.....	.....	1.93	Climax.....	61	-5	16.5	3.00
Rocklin.....	70	32	52.1	2.80	Colorado Springs.....	61	5	32.7	0.11
Rumsey.....	69	34	52.8	2.84	Come (near).....	42	0	22.2	0.41
Sacramento.....	66	26	47.2	2.58	Cope.....	63	2	30.9	1.10
Sacramento.....	82	31	54.9	1.99	Crook.....	57	-13	27.4	1.00
Sacramento.....	69	28	53.2	1.99	Cumbres.....	42	-9	19.8	4.50
Saint Helena.....	66	26	45.8	4.48	Deer Trail.....	.....	.....	.....	0.85
Salinas.....	69	33	53.3	1.57	Delta.....	63	11	34.4	0.45
Salinas.....	62	28	50.5	1.48	Dillon.....	.....	.....	.....	1.38
Salton.....	100	30	59.3	0.43	Downing.....	59	-2	31.0	0.44
Sanger Junction.....	76	35	53.3	0.85	Dumont.....	.....	.....	.....	1.36
San Ardo.....	72	31	51.0	0.48	First View.....	.....	.....	.....	0.30
San Ardo.....	72	31	51.0	1.83	Fort Collins (near).....	.....	.....	.....	0.70
San Bernardino.....	77	31	53.4	3.30	Fort Logan.....	64	2	34.0	0.77
San Diego B'ks.....	68	39	53.0	2.51	Fruita.....	61	22	36.4	0.80
San Gabriel.....	72	35	55.0	2.26	Garnett.....	.....	.....	.....	0.32
San Jose.....	67	35	52.5	1.60	Gaynor.....	.....	.....	.....	1.38
San Luis L. H.....	.....	.....	.....	3.97	Georgetown.....	48	8	29.7	0.80
San Mateo.....	65	35	49.5	1.55	Glen Eyrie.....	58	9	34.4	0.50
San Miguel.....	68	30	49.9	0.97	.....	.....	.....	.....	.....
San Pedro.....	74	41	56.7	3.19	.....	.....	.....	.....	.....

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Colorado—Cont'd.	o	o	o	Ins.	Florida—Con.	o	o	o	Ins.
Gold Hill.....	.....	.....	.....	1.45	Ocala *†1.....	80	32	60.5	0.24
Granada.....	.....	.....	.....	0.23	Orange City †1.....	86	32	61.4	0.48
Greenhorn †.....	62	2	32.8	1.30	Orlando †.....	82	40	63.8	2.00
Grover †.....	52	4	24.7	0.78	Pasadena †.....	83	34	62.0	2.05
Hugo †.....	68	2	33.2	0.30	St. Andrews Bay †.....	74	33	58.8	1.40
Husted †.....	68	2	33.3	0.30	St. Francis B'ks.....	80	35	59.3	0.85
Idaho Springs †.....	54	1	30.4	0.80	St. Petersburg †1.....	82	38	62.3	1.13
Jefferson *†1.....	46	6	22.2	1.75	Tallahassee †.....	80	34	58.3	2.58
Julesburg †.....	51	9	24.8	2.05	Tarpon Springs †.....	82	37	61.2	1.69
Kit Carson *1.....	64	8	31.0	0.40	Georgia.....	.....	.....	.....	.....
Lake *.....	.....	12 ^b	.....	.....	Adamsville †.....	70 ^b	22 ^b	48.7 ^b	1.62 ^b
Lamar †.....	66	8	36.4	0.04	Allapaha †.....	76	28	55.1	2.00
La Porte.....	.....	.....	.....	1.34	Americus †.....	80	27	54.6	3.70
Las Animas †.....	67	0	34.2	0.53	Athens a †.....	65	27	48.3	3.07
Lavender.....	.....	.....	.....	1.24	Athens b †.....	65	21	47.4	3.22
Lay.....	.....	.....	.....	0.99	Blakely *†1.....	72	29	56.4	3.58
Le Roy *†2.....	49	5	29.3	2.24	Canton †.....	.....	.....	.....	2.48
Leslie.....	.....	.....	.....	0.74	Dahlonega †.....	67 ¹	23 ¹	46.0 ¹	3.31 ¹
Livermore.....	56	0	33.0	1.10	Darien †.....	80 ¹	32 ¹	57.6 ¹	0.20 ¹
Loveland.....	.....	.....	.....	0.55	Diamond †.....	65	18	43.4	4.16
Magnolia.....	.....	.....	.....	0.95	Elberton †.....	70	27	49.2	3.54
Manhattan.....	.....	.....	.....	0.69	Forsyth *†.....	76	32	54.9	4.93
Meeker †.....	54	2	29.0	1.30	Fort Gaines †.....	76	30	54.7	2.22
Middle Box Elder.....	.....	.....	.....	1.12	Fort McPherson.....	58	7	39.8	2.80
Minneapolis †.....	.....	.....	.....	0.90	Gillsville *†1.....	66	28	48.9	3.90
Monte Vista a.....	42	-14	17.8	0.49	Hephzibah *†2.....	68	33	52.2	1.93
Moraine †.....	50	8	29.0	1.30	La Grange *†1.....	69	30	50.3	5.98
Pagoda (near) †.....	48	9	25.6	1.90	Louisville †.....	77	28	52.6	3.50
Parachute †.....	58 ^f	6 ^f	33.7 ^f	0.82 ^f	Marietta †.....	65	24	46.6	4.53
Paradox.....	.....	.....	.....	1.24	Milledgeville †.....	72	29	51.3	4.13
Platoro †.....	40	-18	15.4	2.10	Millen †.....	73	24	51.3	2.15
Red Cliff.....	.....	.....	.....	2.68	Monticello †.....	64	30	49.5	5.22
Rico.....	.....	.....	.....	2.85	Point Peter *.....	64 ^b	28	47.1	3.50
Robb †.....	58	1	31.4	1.80	Poultan †.....	76	26	53.8	3.10
Rocky Ford †.....	60	-5	34.8	0.80	Quitman a.....	75	32	57.7	4.02
Saint Cloud.....	.....	.....	.....	0.52	Quitman b †.....	82	39	58.0	3.15
San Acacia.....	.....	.....	.....	1.32	Resaca †.....	.....	.....	.....	3.15
Sanborn.....	.....	.....	.....	0.60	Rome †.....	.....	.....	.....	2.72
San Luis †.....	49	-10	23.0	1.25	Thomasville †.....	76	30	57.3	2.69
Sedgwick.....	.....	.....	.....	1.11	Toccoa †.....	66	27	47.2	4.18
Sheridan Lake *†1.....	60	15	32.2	0.17	Union Point †.....	68	20	48.0	2.05
Smoky Hill Mine †.....	55	5	32.6	1.50	Waynesborough †.....	74 ^b	28 ^b	53.0 ^b	3.99
Springfield.....	.....	.....	.....	0.89	Alabama.....	.....	.....	.....	2.99
Stamford.....	.....	.....	.....	1.10	American Falls †.....	46	-7	24.7	0.39
Steamboat Spring †.....	44	-20	20.0	3.20	Boise Barracks.....	54	4	29.9	0.25
Surface Creek †.....	55	10	33.5	1.62	Era †.....	45	-6	21.8	0.03
Table Rock †.....	57	-4	28.2	1.11	Fort Sherman.....	.....	8	.....	0.32
T. S. Ranch †.....	58	17	35.8	1.14	Garden Valley †.....	42	-2	27.8	0.73
Thon †.....	78	3	33.1	1.28	Henrys Lake †.....	45	-18	19.5	1.00
Twin Lakes.....	.....	.....	.....	0.64	Kootenai *†1.....	50	4	29.8	0.92
Vilas.....	.....	.....	.....	0.87	Moscow *†1.....	51	20	36.3	0.97
Villa Grove †.....	.....	.....	.....	1.22	Ruthburg *†1.....	57	12	30.5	1.03
Ward District.....	.....	.....	.....	3.48	Illinois.....	.....	.....	.....	.....
Waterville.....	.....	.....	.....	0.50	Alton †.....	.....	.....	.....	4.38
Yuma †.....	.....	.....	.....	1.55	Aurora a †.....	49	0	29.6	1.18
Connecticut.....	.....	.....	.....	.....	Aurora b †.....	53	2	30.5	1.51
Canton.....	46	1	28.4	1.54	Beardstown †.....	.....	.....	.....	3.03
Colchester.....	51	5	29.8	1.22	Beason *.....	53	7	33.8	1.86
Falls Village.....	.....	.....	.....	1.36	Bloomington †.....	60	8	32.6	2.31
Fort Trumbull.....	.....	8	.....	1.12	Carlinville †.....	63	14	38.4	3.77
Hardford †.....	.....	.....	.....	1.28	Centralia.....	62	16	38.0	5.65
Lake Konomoc.....	.....	.....	.....	1.72	Charleston *1.....	58	12	35.6	4.28
Lebanon.....	.....	.....	.....	1.31	Chester †.....	.....	.....	.....	3.98
Mansfield †.....	44	2	26.9	1.60	Dixon †.....	54	0	30.7	1.69
New Hartford a *†1.....	40	-3	23.3	1.86	East Peoria *1.....	58	8	35.4	4.31
New Hartford b.....	.....	.....	.....	3.30	Elsworth †.....	56	4	32.6	2.75
N. Grosvener Dale †.....	48	0	27.3	1.70	Fairmount †.....	59	11	34.8	2.60
Norwalk a †.....	53	8	32.9	0.91	Fort Sheridan.....	48	0	29.7	1.81
Norwalk b.....	51	6	29.7	1.26	Golconda *1.....	72 ²	22	42.0	2.99
Southington *1.....	46	6	28.9	1.28	Greenville †.....	63	15	37.1	4.41
South Manchester.....	.....	.....	.....	1.68	Griggsville †1.....	59	8	35.0	3.73
Stevens.....	.....	.....	.....	1.09	Havana †.....	60	8	36.5	1.98
Stoughton.....	.....	.....	.....	1.25	Hennepin †.....	46	3	28.6	0.60
Waterbury *†1.....	50	6	29.9	1.72	Irishtown.....	.....	.....	.....	3.03
Wallingford †.....	.....	.....	.....	1.72	Jerseyville †.....	60	11	35.4	3.81
Waterbury.....	47	4	27.4	1.30	Jordan Grove †1.....	66	20	40.4	4.00
West Simsbury.....	.....	.....	.....	1.19	La Grange †.....	48 ¹	4 ¹	29.2 ¹	0.83 ¹
Delaware.....	.....	.....	.....	.....	Lanark †.....	50	-3	27.4	1.83
Dover †.....	56	12	36.2	3.02	Louisville *1.....	59	19	37.3	4.00
Kirkwood *2.....	52	.....	33.0	2.02	Manchester *.....	.....	5	.....	.....
Seaford †.....	59	8	36.4	.....	Martinsville *1.....	60	15	38.2	1.80
District of Columbia.....	.....	.....	.....	.....	Mascoutah †.....	65	22	40.1	3.00
Dist'ng Reserv' *2.....	57	4	36.2	1.77	Mattoon †.....	55	19	37.8 ¹	1.80
Kendall Green *†1.....	34	10	36.1	3.70	McLeansborough *1.....	60	30	40.8	3.44
Long Bridge †.....	.....	.....	.....	2.23	Mound Carmel †.....	.....	.....	.....	4.58
Rec'ng Reserv' *2.....	54	5	35.9	1.75	Muddy Valley †.....	68 ⁴	24 ⁴	43.5 ⁴	3.43
Washington B'ks.....	60	9	39.2	3.08	Olney a *1.....	60	18	40.2	4.15
West Washington †.....	66	6	38.3	3.98	Olney b *1.....	62	18	38.4	4.24
Florida.....	.....	.....	.....	.....	Oswego *1.....	48	-2	29.2	1.17
Amelia †.....	79	31	56.2	2.60	Oshtemo †.....	54	3	33.3	1.52
Archer †.....	82	27	58.2	0.32	Palestine †1.....	62	15	37.9	4.97
Brookville †.....	79	35	61.3	0.82	Pann *1.....	58	12	38.4	5.61
Eustis †.....	84	36	60.2	0.95	Peoria a †.....	.....	.....	.....	2.16
Federal Point †.....	80	37	58.8	0.26	Peoria b *1.....	57	7	35.0	1.84
Flatwood *.....	.....	32	.....	.....	Philo †.....	57	9	33.9	3.71
Fort Barrancas.....	82	35	59.8	0.49	Ranton †.....	55	2	31.9	2.41
Fort Meade †.....	82	30	60.4	1.87	Riley †.....	44	-1	27.8	1.22
Gramercy.....	82	39	61.6	0.30	Rockford †.....	47	0	28.6	1.95
Green Cove Sp'gs †.....	79	31	58.3	1.39	Rock Island Ars'l.....	51	-2	29.4	1.39
Homeland †.....	84	34	64.7	0.50	Rushville.....	62	8	36.8	2.90
Hypoluxee *†2.....	81	45	66.0	4.20	Saint John *2.....	63	22	40.0	2.56
Kissimmee City †.....	.....	36	.....	2.26 ¹	Sandwich †.....	51	4	31.3	1.37
Madison †.....	78 ¹	32 ¹	59.5 ¹	.....	Shawneetown †.....	.....	.....	.....	1.07
Manatee †.....	80	43	64.5	1.50	Sycamore *1.....	44	1	29.4	1.31
Merritts Island †.....	78	42	63.9	2.77	.....	.....	.....	.....	.....
Myers †.....	82	43	63.4	0.75	.....	.....	.....	.....	.....

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Illinois—Cont'd.</i>				<i>Ins.</i>	<i>Iowa—Cont'd.</i>				<i>Ins.</i>
Walnut f.....	54	1	32.2	1.48	Vinton *1.....	49	6	27.0	1.82
Warsaw f.....	50	13	35.4	4.09	Washington.....	56	1	33.1	1.45
White Hall *1.....	62	13	35.4	4.09	Webster City *1.....	42	10	25.2	1.53
Winnebago *1.....	46	2	28.9	1.76	Williams *1.....	13	21.4	0.75	0.75
<i>Indiana.</i>					Winterset f.....	49	2	28.7	0.65
Angola *1.....	52	2	31.0	2.45	<i>Kansas.</i>				
Butlerville *1.....	52	12	36.6	4.05	Abilene f.....	65	16	38.0	3.17
Columbia City *1.....	53	8	32.3	2.33	Allison *1.....	59	0	28.8	1.88
Columbus.....	62	15	37.8	3.59	Altoona *1.....	58	20	34.6	6.14
Connersville f.....	64	7	37.3	3.77	Antelope f.....	62	15	36.4	3.10
De Gonia Springs.....	62	20	43.1	3.83	Arkalon f.....	66	12	37.2	2.00
Evansville f.....	61	12	38.3	3.50	Atchison f.....	62	13	36.2	2.68
Farmland.....	64	14	36.1	2.41	Bellefonte f.....	66			0.78
Franklin.....	61	12	38.3	3.50	Bucklin.....				1.40
Hammond f.....	51	3	31.1	1.83	Buffalo Park *.....	60	12		1.10
Huntingburg f.....	63	20	41.5	3.79	Burr Oak *.....	56	1		3.00
Huntington f.....	64	18	41.8	2.58	Cawker City *1.....	55	10	33.3	6.00
Jeffersonville.....	64	18	41.8	2.58	Collyer *.....	66	10		1.88
La Fayette f.....	56	5	35.0	2.19	Columbus f.....	78	20	40.2	5.26
Logansport a f.....	58	9	36.5	2.39	Concordia *.....	56	7	32.2	2.36
Logansport b.....	58	9	36.5	2.39	Cunningham f.....	66	15	34.7	2.21
Marengo.....	70	21	44.5	6.82	Downs.....				2.43
Marion f.....	62	7	33.4	3.31	Elco *1.....	66	16	38.2	3.30
Mauzy.....	60	7	33.7	4.16	Elk Falls f.....	58	21	39.2	6.25
Michigan City.....	53	9	33.3	1.64	Ellis *.....	58	10	37.9	2.40
Mount Vernon a f.....	65	20	41.4	2.83	Emporia f.....	64	16	38.5	4.15
Mount Vernon b.....	65	20	41.4	2.83	Englewood *1.....	66	15	38.4	1.83
Muncie f.....	62	16	33.1	2.02	Eureka Ranch f.....	60	1	35.6	1.81
Point Isabel f.....	65	10	34.8	3.06	Ft. Leavenworth a.....	60	11	37.6	3.82
Princeton f.....	63	18	39.9	2.95	Ft. Leavenworth b.....	60	11	36.4	3.67
Rockville.....	59	9	36.6	3.87	Fort Riley.....	67	13	38.6	2.83
Rushville f.....	64	14	41.5	3.78	Fort Scott a.....	64	14		7.11
Seymour f.....	59	13	38.0	3.73	Fort Scott b.....	61	4	32.0	6.88
Shelbyville *1.....	64	13	38.0	3.73	Fremont f.....	61	4	32.0	6.88
Terre Haute f.....	68	16	40.3	3.79	Gibson.....	55	2	31.4	0.93
Vevay.....	68	16	40.3	3.79	Gove City *1.....	59	5	30.7	1.60
Vincennes f.....	60	11	39.7	4.29	Grainfield.....	53	4		0.80
Worthington f.....	60	11	39.7	4.29	Greensburg f.....	64	21	40.4	5.55
<i>Indian Territory.</i>					Grenola *1.....	62	12		0.75
Eufaula f.....				1.89	Grinnell *.....	62	16	35.7	3.78
Fort Supply.....	72	10	38.8	2.02	Halstead.....	61	11	34.2	0.75
Heraldton f.....	68	36	48.8	0.66	Havensville *1.....	61	11	34.2	0.75
Purcell f.....	75	25	48.0	1.18	Horton f.....	64	11	33.4	0.92
South McAlester f.....	70	27	50.0	2.56	Hoxie *.....	61	9		0.85
Tulsa f.....				0.75	Hutchinson f.....	69	19	39.7	3.88
<i>Iowa.</i>					Independence f.....	66	21	41.1	4.56
Algona *1.....	40	10	22.5	0.84	Kansas City.....	61	11	36.6	4.10
Altamont f.....	43	13	22.8	0.94	Kellogg.....	62	12		4.05
Altamont f.....	43	13	22.8	0.94	Kiowa.....	72	19	40.0	2.78
Amana f.....	58	4	29.3	1.37	Kirwin.....				1.56
Ames b.....	48	12	24.6	0.66	La Crosse f.....	55	8	34.4	1.51
Atlantic f.....	54	8	27.6	0.30	Lakin f.....	63	7	33.1	0.40
Bancroft f.....	42	20	27.7	1.00	Lawrence.....	61	14	36.6	4.96
Belle Plaine f.....	49	5	27.6	1.40	Lebo f.....	65	13	37.8	4.54
Blakeville *1.....	49	8	27.1	1.15	Leoti f.....	61	2	32.1	0.95
Blackton f.....	65	3	31.3	1.48	Lincoln.....	60	18	34.2	6.75
Bonaparte *1.....	56	6	33.0	1.66	McAllister *.....	60	6		1.72
Carroll f.....	48	9	24.6	0.86	McPherson f.....	63	15	36.6	3.05
Cedar Falls f.....	51	3	30.3	0.73	Manhattan a.....	64	12	34.6	2.95
Cedar Rapids f.....	51	3	30.3	0.73	Manhattan b.....	59	11	31.7	2.67
Clarinda f.....	52	4	30.5	1.19	Manhattan c.....	59	11	31.7	2.67
Clinton.....	52	1	29.9	1.70	Medicine Lodge.....	56	10	33.6	2.05
College Springs *1.....	50	6	33.3	0.60	Minneapolis *1.....	56	10	33.6	2.05
Corning b.....	64	0	30.0	0.68	Monument *1.....	61	8	25.5	1.00
Corydon.....	56	1	30.4	1.70	Morse f.....	61	10	35.4	4.79
Cresco f.....	47	16	23.3	1.02	Morton *1.....	70	14	35.1	0.50
Delaware *1.....	50	10	24.8	0.13	Norton f.....	54	2	30.8	1.28
Elkader f.....	52	8	26.5	0.12	Oakley *1.....	56	12	34.5	
Fayette f.....	53	10	26.3	1.05	Oberlin f.....				2.37
Fort Madison *1.....	59	8	35.9	1.30	Ogallah.....	69	11		2.41
Galva f.....	48	12	23.5	0.70	Oswego f.....	66	20	41.6	5.48
Glenwood f.....	68	0	32.5	0.53	Page City *.....	54	8	30.6	0.90
Grand Meadow *1.....	47	12	26.2	1.19	Pauline.....	63	13	37.0	4.45
Greenfield.....	50	4	27.2	1.33	Phillipsburg f.....	70	2	31.6	2.08
Grinnell.....	48	5	28.4	1.32	Plainville.....	60	16		2.95
Grundy Centre *1.....	48	8	26.1	0.88	Pleasant Dale *1.....	59	1	33.2	3.09
Hampton *1.....	45	14	23.0	1.12	Quinter *.....	58	10		1.00
Havelock f.....	42	14	24.5	1.50	Rome *1.....	61	23	39.2	3.96
Hawk Eye.....				1.25	Salina *1.....	58	13	34.9	2.01
Hopewille f.....	53	0	28.9	1.46	Sedan f.....	65	20	40.0	4.51
Independence *1.....	52	9	25.8	0.87	Seneca f.....	59	1	32.0	2.03
Indianola f.....	52	2	30.6	1.24	Shields f.....	60	1	38.2	1.14
Iowa City f.....	50	2	29.6	1.23	Tribune f.....	60	7	33.5	0.46
Keosauqua f.....	57	4	33.1	1.89	Ulysses f.....	75	14	41.8	0.52
Larrabee *1.....	43	14	21.7	1.42	Wakefield *1.....	62	11	35.7	3.17
Le Claire f.....				1.38	Wa Keeney *1.....	54	14		1.30
Logan f.....	52	3	31.6	1.14	Wallace a f.....	60	10		0.41
McCausland *1.....	48	0	29.3	1.56	Wallace b.....	60	10		0.50
Maquoketa *1.....	48	4	29.1	1.71	Weskau a.....	62	7		0.25
Marshalltown f.....	49	5	29.2	1.31	Weskau b f.....	65	2	33.2	0.99
Mason City f.....	43	16	22.7	0.84	Winona *1.....	69	9	30.0	0.80
Maxon *1.....	50	3	28.7	2.16	Yates Centre f.....	66	12	38.0	6.31
Mechanicville *1.....	51	4	29.0	1.32	<i>Kentucky.</i>				
Monticello *1.....	50	7	28.2	1.18	Bowling Green f.....	70	20	46.6	2.60
Moar *1.....	56	5	31.7	1.41	Burnside f.....	60	15	36.9	1.88
Mount Pleasant a.....	52	6	30.2	1.67	Caddo f.....	60	15	36.9	1.88
Mount Vernon *1.....	52	6	30.2	1.67	Cattlettsburgh f.....	65	25	45.1	2.97
Murray f.....	55	0	29.9	1.88	Canton *1.....	69	28	46.5	2.44
Muscataine.....	54	0	31.0	0.98	Edmonton f.....	63	18	43.1	3.04
Orange *1.....	57	0	30.6	1.54	Falmouth f.....	65	14	37.0	3.42
Oskaloosa f.....	57	0	30.6	1.54	Fort Thomas.....	65	14	37.0	3.42
Panama f.....	51	6	27.5	0.37	Frankfort *1.....	67	23	44.2	3.28
Richland *1.....	51	0	27.5	0.37	Grand Rivers.....	67	24	45.2	1.16
Storm Lake f.....	44	13	23.6	0.90					
Tipton f.....	52	3	30.7	0.97					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Kentucky—Con.</i>					<i>Massachusetts—Con.</i>				
Greensburgh †	69	16	40.9	2.62	Concord †	48	4	35.6	2.27
Harrodsburgh †	69	13	39.9	2.12	Cotuit	48	6	30.0	1.94
La Grange †	66	13	39.9	2.38	Deerfield *1	50	10	25.8	
Louisia	66	20	42.8	1.97	Dudley	49	2	26.0	2.06
Middlesborough †	66	20	42.8	3.41	Egg Rock, Nahant.	42	6	27.5	
Newport Barracks.	67	14	38.2	3.01	Fall River a *1.	48	7	30.8	1.90
Paducah †	67	18	41.4	2.56	Fiskdale				1.07
Pellville †	67	18	41.4	3.99	Fitchburg a *1.	44	2	25.2	2.81
Richmond †	62	20	41.6	1.91	Fitchburg b	44	3	25.1	2.50
Shelbyville †	68	15	39.6	4.26	Florida a †	45	10	19.1	
South Fork †			40.6		Florida b	45	7	20.8	2.59
Springfield †	68	11	41.4	2.60	Fort Warren	43	3	23.6	0.55
Williamsburgh †				2.00	Framingham	49	1	27.6	3.20
<i>Louisiana.</i>					Gilbertville	47	3	26.8	1.81
Abbeville	82	39	62.2	1.70	Groton a	48	1	27.6	2.62
Alexandria †	76	28	53.8	2.28	Heath *1	60	6	25.5	
Amite City †	78	30	55.0	1.27	Hyannis *1.	49	10	32.6	2.14
Baton Rouge.	77	36	56.7	1.33	Kendall Green.	45	0	27.6	3.48
Cameron †	80	36	61.5	1.17	Lake Cochituate.	54	7	27.8	2.80
Cheneyville †	77	35	61.2	3.08	Lawrence	44	1	26.0	2.18
Clinton	79 ^d	47 ^d	62.8 ^d	1.38 ^d	Leicester	42	3	23.2	1.89
Coushatta a †				2.60	Leominster				2.52
Coushatta b †	76	27	55.8	2.71	Long Plain.	46	4	28.9	2.49
Davis				3.51	Lowell a	45	2	25.7	2.74
Delhi †				4.70	Lowell b	43	4	24.8	
Donaldsonville	80	38	60.6	0.10	Lowell c	46	0	26.8	
Edgard	78	39	60.4	0.27	Ludlow a	45	10	24.8	2.15
Emilie	78	36	59.1	0.07	Lynn.	50	4	28.6	2.43
Farmerville	79	31	55.2	3.90	Mansfield *1.	48	2	28.2	2.43
Girard †				4.59	Middleborough	48	4	29.2	2.50
Grand Cane	79	32	56.1	4.95	Milton	45	3	28.7	3.75
Grand Coteau †	77	42	60.6	2.04	Monroe	53	0	25.2	3.13
Houma †	81	38	60.4	0.05	Monson	46	2	27.6	1.57
Jackson Barracks.	83	37	59.3	0.07	Mount Nonotuck				2.76
Jeaneerette	80	38	60.4	0.87	Mystic Lake				3.00
La Fayette †	75	37	58.7	1.83	Mystic Station.				2.60
Lake Charles	78	32	57.0	1.60	Nahant.	41	6	28.2	
Lawrence †	78	46	61.9	0.30	New Bedford a †	48	2	29.4	2.35
Liberty Hill	78	27	56.0	3.74	New Bedford b	49	7	30.8	2.22
Luling †	81	35	59.8	0.64	Newburyport a	46	4	28.7	2.67
Marksville †	80	36	58.8	1.95	Newburyport b.				2.40
Maurepas	78	35	58.7	0.60	Northampton	44	0	27.5	2.24
Melville †				3.01	North Billerica	48	0	27.8	2.55
Minden †	77	27	53.6	3.24	Plymouth *1	45	6	31.2	3.72
Monroe †	75	35	56.9	6.75	Provincetown.	45	13	31.4	1.88
N. La. Ex. Station	72	29	54.3	5.53	Randolph				1.96
Paincourtville	79	37	59.6	0.60	Roberts Dam				2.42
Plaquemine	78	38	55.8	1.53	Roxbury †	44	6	29.2	2.52
Roseland	80	31	57.0	0.72	Salem b				2.58
Ruell Beach	76	38	59.4	2.40	Savoy	47	14	19.0	
Sugar Ex. Station †	79	40	60.4	0.00	Somerset *1	54	6	30.6	1.76
Thibodaux				0.17	South Hingham.				2.66
West End.				0.07	Springfield Army †	45	4	27.7	2.09
Winnaborough	79	25	54.1	3.60	Taunton a †	53	6	29.8	2.40
<i>Maine.</i>					Taunton b	50	5	31.0	2.33
Belfast *6	46	2	24.2	2.61	Taunton c	50	2	31.3	5.41
Calais	45	2	22.8	5.20	Taunton d †	44	6	29.7	2.40
Cornish	47	4	23.6	1.95	Turners Falls.	47	5	26.5	1.67
East Machias †	44	4	22.9	1.81	Wetfield	45	1	26.5	3.36
Fairfield	45	14	19.2	2.28	Waltham				2.71
Farmington †	50	10	23.6	2.33	Wellesley	40	0	25.6	2.95
Fort Preble	46	4	27.0	1.80	Westborough	48	1	28.1	2.46
Houlton †	44	19	15.8	1.74	Williamstown †	43	3	25.2	1.13
Indian Stream †	45	17	18.0	3.14	Winchester				3.03
Kennebec Arsenal.	45	13	21.5	2.07	<i>Michigan.</i>				
Kents Hill.	47	6	21.8	1.60	Adrian	54	1	29.4	2.60
Lewiston †	46	9	23.3	2.31	Allegan	50	2	29.9	2.17
Orono †	50	5	22.9	1.96	Alma	43	9	25.6	1.33
Pett Menan *1	42	5	24.6		Ann Arbor	46	1	27.5	1.90
<i>Maryland.</i>					Arbela	40	3	26.1	2.92
Barren Cr's Sp'gs †	60	9	36.8	2.38	Atlantic.	40	2	18.0	3.00
Boothcherville *1.	60	8	37.4	1.95	Ball Mountain.	44	9	26.4	2.60
Cumberland a †	58	2	34.5	1.72	Bear Lake	45	19	24.0	1.56
Cumberland b †	54	3	37.8	1.62	Bellaire.	49	18	19.8	0.90
Darlington †	55	12	28.0	1.82	Benton Harbor.	54	5	32.4	3.02
Denton †				2.46	Benzonia	39	0	23.1	1.44
Easton †	60	13	37.5	2.98	Berlin *1	48	13	26.2	3.67
Fallston *1.	63	12	34.3	2.54	Berrien Springs a †	50	7	33.1	5.36
Fort McHenry	56	13	36.2	2.19	Berrien Springs b				2.15
Frederick	56	1	36.2	2.60	Birch Run	48	8	27.3	2.22
Great Falls *8	55	4	35.7	1.56	Birmingham †	47	5	27.9	2.02
Hagerstown.	60	2	35.6	1.57	Bronson	54	0	29.9	2.19
Jewell *2.				2.75	Caldwell	40	13	23.0	1.50
Leondartown †	54	16	37.1	2.95	Calumet	40	7	17.6	1.09
McDonogh †	53	10	34.3	2.01	Charlevoix.	40	7	20.5	1.65
Mt. St. Marys Col †	53	10	32.5	2.53	Cheboygan	43	24	17.9	2.28
New Market †	52	10	34.9	2.92	Clinton	49	2	28.2	3.30
Solomons †	55	10	37.2	4.48	Concord.	48	2	29.3	1.89
Taneytown †				2.50	Crystal Falls	47	19	17.0	2.70
Woodstock †	53	3	35.0	2.45	Eden	51	3	29.2	3.05
<i>Massachusetts.</i>					Fairview	37	2	23.2	1.59
Adams a	50	2	29.5		Fitchburgh	44	12	25.8	2.28
Amherst †	49	5	27.3	1.81	Flint	46	15	26.4	2.40
Amherst Ex. St'n a †	46	8	25.7	1.59	Fort Brady	41	26	17.0	1.21
Amherst Ex. St'n b.	46	7	26.1	1.90	Fort Mackinac.	39	9	19.2	1.53
Andover †	48	0	24.1	1.38	Fort Wayne	47	1	29.7	2.62
Ashland				3.08	Frement	49	1	25.5	1.70
Blue Hill (sum't).	43	0	25.7	1.93	Gladwin	41	15	23.1	1.35
Blue Hill (valley).	45	0	26.8		Grand Rapids *1	49	2	30.3	1.47
Boston				2.49	Grape	52	5	31.0	1.94
Cambridge a	46	2	28.4	1.70	Grayling	42	23	19.7	1.30
Cambridge b	44	4	26.8	2.46	Hanover	49	0	30.7	1.92
Chestnut Hill	44	4	27.6	2.78	Harbor Springs	43	14	21.8	2.45
Chicopee				1.75	Harrison	52	13	21.0	2.28
Clinton				1.82	Harrisville	36	18	19.9	2.66

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Michigan—Cont'd.					Missouri—Cont'd.				
Hart	42	2	25.0	2.20	Eldon	70	18	40.1	7.34
Highland Station	47	9	28.0	2.45	Excelsior Springs	65	9	33.6	4.26
Hillsdale	40	7	23.1	0.93	Fayette	64	14	38.6	5.34
Howell	45	15	25.7	2.52	Fox Creek	64	15	38.8	4.30
Hudson	40	10	25.2	3.10	Gordonville	64	26	44.7	3.24
Ivan	43	9	22.8	2.22	Harris	55	3	29.7	1.28
Jeddo	41	9	25.0	2.26	Hermann	63	19	39.9	5.92
Kalamazoo	53	1	30.2	3.26	Jefferson Barracks	70	11	38.7	4.89
Lansing	49	6	27.7	1.64	Jefferson City	67	18	40.0	6.20
Lathrop	33	5	22.2	2.25	Jerome	62	22	41.0	5.43
McMillan	51	6	29.0	2.19	Lamar	62	22	41.0	6.43
Madison	51	6	29.0	2.19	Lamonte	62	22	41.0	6.43
Marshall	51	6	29.0	2.19	Lebanon	62	19	40.2	6.00
May	46	4	25.6	2.44	Liberty	62	10	35.1	3.74
Mio	37	21	19.8	1.03	Louisiana Bridge	62	18	42.3	3.10
Montague	39	3	26.2	2.31	Marble Hill	62	18	42.3	3.10
Montville	39	4	31.0	2.31	Marshall	62	18	42.3	3.10
Noble	42	4	28.7	2.05	Mexico	62	18	42.3	3.10
North Aurelius	42	4	28.7	2.05	Mine La Motte	64	16	43.7	2.54
North Marshall	50	4	25.4	1.75	New Haven	66	16	38.6	5.25
Olivet	45	5	26.7	2.54	Oak Ridge	71	26	45.0	3.48
Ovid	48	5	26.7	2.54	Oregon	66	9	32.9	1.68
Parkville	50	2	29.6	2.30	Phillipsburg	56	9	33.3	1.61
Rawsonville	50	2	29.6	2.30	Pickering	50	4	29.1	1.76
Rockland	52	18	35.4	1.40	Platte River	54	8	31.4	2.78
Romeo	46	8	26.0	1.85	Princeton	59	5	34.0	1.75
Saint Ignace	38	16	25.9	1.40	Rolla	67	19	40.3	5.06
Sand Beach	38	16	25.9	1.40	Saint Charles	67	18	38.3	4.97
Standish	34	16	25.6	0.78	Saint Joseph	69	19	39.0	4.29
Stanton	40	2	25.0	1.25	Saint Louis	62	12	37.4	6.42
Thornville	46	10	28.5	2.03	Sedalia	62	12	37.4	6.42
Vandalia	51	1	30.7	1.99	Shelbina	62	16	39.9	4.80
Vienna	48	13	31.2	2.35	Stellada	62	16	39.9	4.80
Washington	48	13	31.2	2.35	Warrensburg	60	15	37.7	5.16
Weldon Creek	54	13	33.6	2.24	Warrenton	67	14	38.5	3.42
White Pigeon	54	0	28.9	2.58	Zeitonia	67	14	38.5	3.42
Ypsilanti	48	0	29.2	2.58					
Minnesota.					Montana.				
Albert Lea	42	-20	31.6	0.61	Camp Poplar River	47	-22	9.4	0.60
Alexandria	46	-22	21.4	1.21	Fort Assinaboine	50	-16	24.0	0.70
Alma City	46	-22	21.4	1.21	Fort Custer	50	-16	24.0	0.70
Caledonia	44	-15	22.4	0.90	Fort Keogh	58	-11	19.0	0.60
Crookston	46	-27	11.3	0.44	Fort Missoula	55	-4	28.2	0.27
Farmington	48	-22	22.8	2.60					
Fergus Falls	42	-20	17.5	1.00	Nebraska.				
Fergus Falls	42	-20	17.5	1.00	Agee	62	0	26.4	0.21
Fort Ripley	47	-20	23.0	0.97	Alliance	62	0	26.4	0.21
Fort Snelling	47	-20	23.0	0.97	Ansley	65	-8	23.3	1.28
Granite Falls	43	-21	18.3	0.59	Ansley	65	-8	23.3	1.28
Kimbria	44	-20	19.7	1.05	Asbury	60	0	31.4	0.29
Long Prairie	35	-34	7.6	1.00	Bassett	60	-4	25.0	0.46
Maple Plain	42	-20	21.7	1.82	Belvidere	57	7	30.8	0.69
Minneapolis	41	-20	20.8	1.54	Burwell	71	1	31.6	0.69
Montevideo	48	-25	17.0	0.54	Crookston	53	-5	23.2	0.80
Morris	40	-25	15.6	1.35	Cretin	58	0	29.2	1.25
Northfield	44	-20	31.4	1.72	Culbertson	53	-2	26.0	1.10
Ortonville	45	-14	24.2	1.90	David City	50	0	28.8	0.76
Red Wing	45	-14	24.2	1.90	De Soto	50	0	28.8	0.76
Redwood Falls	42	-26	19.7	2.07	Dunning	55	8	30.6	0.42
Rolling Green	42	-26	19.7	2.07	Ericson	52	3	25.7	0.27
Saint Charles	45	-17	21.3	0.73	Ewing	60	0	26.1	0.73
Sheldon	38	-13	23.6	1.59	Falls City	54	14	32.2	0.84
Mississippi.					Fairbury	59	0	30.4	0.91
Agricultural College	71	32	52.0	1.57	Fort Niobrara	68	-10	23.9	0.31
Bay Saint Louis	79	45	60.4	0.75	Fort Omaha	65	0	28.8	0.49
Booneville	70	39	50.4	5.79	Fort Robinson	60	-5	27.2	1.45
Canton	73	33	54.6	3.09	Fort Sidney	55	-7	29.2	0.58
Columbus	75	34	55.8	2.12	Fremont	48	0	28.5	1.70
Edwards	75	34	55.8	2.12	Geneva	50	0	26.0	1.64
Enterprise	79	26	52.6	3.77	Genoa	50	0	26.0	1.64
Fayette	76	26	52.6	3.77	Gering	63	9	31.1	0.40
Greenville	67	35	53.2	3.60	Grand Island	49	-1	28.6	1.40
Hattiesburg	80	32	55.6	3.46	Haigler	62	5	30.5	0.96
Kosciusko	75	32	53.4	2.00	Hartington	48	7	31.6	0.91
Logtown	75	32	53.4	2.00	Hastings	54	4	30.0	1.63
Louisville	78	28	54.2	0.67	Hayes Centre	60	10	30.3	2.22
Natchez	78	28	54.2	0.67	Hay Springs	61	0	25.2	0.80
Okolona	78	28	54.2	0.67	Hebron	56	5	32.0	1.90
Palo Alto	73	32	53.6	3.71	Holdrege	60	4	29.2	1.63
Pontotoc	70	31	51.1	3.41	Imperial	60	4	29.2	1.63
Port Gibson	80	39	54.3	3.68	Kennedy	63	3	27.7	0.48
Ship Island	72	40	59.8	0.25	Kimball	60	0	30.4	1.52
Vaiden	78	39	52.8	3.72	Lexington	67	-5	29.4	2.10
Washington	78	35	56.7	2.50	Lincoln	55	-2	30.2	0.90
Water Valley	73	30	51.2	3.10	Long Pine	68	-6	30.2	0.70
Waynesborough	75	29	52.0	5.81	Marquette	50	2	31.1	1.30
Yazoo City	75	29	52.0	5.81	Mayberry	60	8	31.4	1.65
Missouri.					Minden	52	0	27.5	3.51
Adrian	63	6	34.9	6.54	Norfolk	50	2	25.1	0.70
Appleton City	63	18	39.6	8.83	North Loup	49	-10	27.2	1.39
Boonville	58	8	37.5	4.30	O'Neill	53	-4	24.1	0.40
Brunswick	58	8	37.5	4.30	O'Neill	53	-4	24.1	0.40
Cape Girardeau	57	9	36.6	4.58	Palmer	50	-4	25.9	1.30
Carrollton	57	9	36.6	4.58	Plattsburgh	54	-6	29.2	1.70
Carthage	68	24	40.7	4.09	Precept	54	-6	29.2	1.70
Chillicothe	63	9	38.7	3.59	Ravenna	54	-6	29.2	1.70
Chillicothe	58	8	41.2	2.01	Seward	62	4	29.6	0.60
Conception	57	4	32.6	1.00	Springview	61	-6	24.6	0.55
Concordia	54	4	32.6	1.00	Syracuse	58	4	30.9	0.71
Dadeville	63	10	39.3	6.63	Tecumseh	56	3	31.5	1.44
Darkeville	63	10	39.3	6.63	Tekamah	53	-7	29.3	0.40
Dunnegan	66	14	36.6	5.71	Thedford	63	-4	34.4	0.55
East Lynn	66	14	36.6	5.71	Wallace	60	4	27.0	0.65
Eight Mile	66	12	38.3	5.34	Weeping Water	56	-2	29.7	0.50
					West Point	48	-3	26.4	0.65

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)				Precip'n.	Stations.	Temperature. (Fahrenheit.)				Precip'n.
	Max.	Min.	Mean				Max.	Min.	Mean		
Nebraska—Cont'd.						New Jersey—Cont'd.					
Whitman *1.	60	6	25.8	0.55		Paterson	55	13	34.3	1.12	
Wilcox a	48	2	29.1	1.72		Plainfield	51	11	33.4	1.60	
Wilcox b *1.	48	2	29.1	1.72		Rancocas *	54	16	34.2	1.62	
York	56	2	28.9	0.17		Readington *1.	54	16	34.2	1.62	
Nevada.						Salem	54	15	35.0	1.44	
Austin	47	5	29.8	0.56		Somerville	53	8	33.2	1.24	
Battle Mountain *1.	51	4	28.9	0.58		South Orange *1.	51	12	31.8	1.58	
Belleville	62	10	30.4	0.80		Tenafly	53	10	32.9	1.55	
Belmont	51	0	30.4	1.64		Trenton *1.	58	10	35.0	1.71	
Beowawe *1.	52	8	26.4	1.00		Vineland	57	13	36.1	1.89	
Brown *1.	70	16	39.8	0.52		Whiting	58	11	35.0	1.22	
Carlin *1.	40	9	19.6	0.60		New Mexico.					
Carson City	62	3	34.2	1.39		Albany	68	21	44.4	0.15	
Crane Ranch	57	17	37.4	0.75		Albuquerque	60	30	47.1	0.84	
Downeyville	57	17	37.4	0.75		Antelope Springs	56	16	36.1	0.13	
Elko *1.	46	8	24.0	3.00		Bloomfield	65	8	36.5	1.31	
Ely	59	9	33.8	0.52		Chama	58	4	31.4	3.95	
Eureka	62	3	31.2	0.50		Coolidge	65	10	37.6	1.29	
Fenelon *1.	55	5	30.9	0.20		Deming *	72	20	50.4	0.86	
Genoa	62	1	34.6	0.31		Dulce	57	7	29.2	1.73	
Golconda	52	8	30.0	0.30		East Las Vegas	68	15	39.4	0.07	
Hallock *1.	58	18	20.3	0.32		Embudo	68	8	38.7	1.18	
Hawthorne a *1.	62	22	39.1	0.72		Estancia Springs	55	9	34.2	0.32	
Hawthorne b	65	11	38.3	0.31		Folsom	71	4	40.2	0.20	
Hot Springs *1.	62	15	32.7	2.10		Fort Bayard	67	16	42.4	0.87	
Humboldt *1.	51	12	35.0	0.23		Fort Marcy	55	12	34.8	1.31	
Lewers Ranch	59	14	36.4	1.92		Fort Stanton	68	11	37.5	1.1	
Lovelock *1.	62	10	36.7	0.15		Fort Wingate	62	8	36.0	1.40	
Mill City *1.	60	15	35.3	0.15		Gallinas Spring	66	20	42.4	0.14	
Monitors Ranch	56	16	32.8	0.23		Halls Peak	57	6	34.0	0.40	
Palmdale *1.	50	0	26.0	0.80		Hillborough	67	18	44.5	0.76	
Palmetto	60	1	33.8	3.77		La Luz	71	28	52.0	0.55	
Pioche	61	3	35.0	1.41		Lordsburg *1.	70	27	48.7	1.01	
Reno *1.	57	13	38.7	0.70		Los Lunas	65	15	42.3	0.25	
Reno State Univ	61	6	40.4	1.40		Monero	51	1	28.5	2.21	
Saint Clair	62	10	35.3	0.66		Olio	58	12	36.8	1.86	
South Camp	65	8	31.4	0.52		Pojoaque	60	15	42.6	0.71	
Sunnyside	62	8	35.2	1.24		Red Cañon	69	21	48.4	0.18	
Tecoma *1.	50	8	28.3	0.20		Socorro	73	21	48.4	0.18	
Toano *1.	48	2	28.9	1.65		Springer	61	2	30.4	1.35	
Tuscarora	63	2	32.2	1.50		Taos	54	2	30.4	1.35	
Tybo.	60	1	33.0	2.36		Wallace	63	17	40.3	0.80	
Verdi *1.	64	0	34.2	1.00		New York.					
Virginia City	56	15	32.2	0.93		Adams Centre	47	3	28.1	1.58	
Wabaska	64	0	37.6	1.35		Addison	47	3	28.1	1.58	
Wadsworth *1.	50	10	29.8	0.60		Alfred Centre	47	1	25.6	2.76	
Wells *1.	44	0	26.7	0.34		Angelica	47	0	26.1	3.06	
Winnemucca *1.	60	10	34.4	.....		Arcade	45	4	24.7	3.35
New Hampshire.						Au Sable Forks	45	4	24.7	3.35	
Belmont	44	-24	17.4	1.84		Avon	43	-3	26.1	2.39	
Berlin Falls	46	-24	19.0	1.33		Baldwinsville	43	-3	26.1	2.39	
Berlin Mills	50	-5	25.4	1.70		Bedford	47	-1	27.7	1.90	
Concord a	48	-4	23.3	1.79		Binghamton	47	-1	27.7	1.90	
East Canterbury	46	-18	18.8	.....		Bloods Depot	49	8	31.0	1.22
Groveton *1.	45	-11	23.0	1.41		Bolivar	50	-16	24.2	0.74	
Hanover a	46	-16	22.8	1.42		Boys Corners *1.	43	-17	18.1	1.34	
Hanover b	43	-16	19.9	1.26		Brookfield	49	3	28.0	1.12	
Lake Village	50	-3	25.8	2.71		Canton	50	14	33.4	0.94	
Littleton	45	-5	25.9	2.71		Carmel	43	-14	19.9	3.48	
Manchester	44	0	35.2	1.86		Central Park, N. Y.	42	-11	23.2	2.23	
Mine Falls	47	-13	22.2	1.94		Cherry Creek	50	10	29.8	1.01	
Naahua	48	-14	22.8	2.10		Constableville	43	-14	19.9	3.48	
Newton	46	-12	22.4	1.93		Cooperstown	43	-11	23.2	2.23	
North Conway	48	-20	18.1	2.05		Davids Island	50	10	29.8	1.01	
Pennichuck Station	46	-12	22.4	1.93		De Kalb Junction	43	-14	19.9	3.48	
Peterborough *	48	-22	33.3	2.04		Demster	49	8	30.9	4.06	
Plymouth	48	-22	33.3	2.04		Dunkirk b.	52	2	28.1	1.53	
Stratford	48	-26	18.1	2.05		Eden Centre	48	4	28.0	.....
Walpole	48	-22	33.3	2.04		Elmira *	52	2	28.1	1.53	
West Milan	48	-26	18.1	2.05		Factoryville	43	3	25.8	1.39	
Wiers Bridge	48	-22	33.3	2.04		Fleming	47	15	32.6	1.37	
Wolfborough	48	-26	18.1	2.05		Fort Columbus	52	10	32.0	0.94	
New Jersey.						Fort Hamilton	43	8	28.8	.....
Allaire	55	9	33.6	.....		Fort Niagara	45	8	28.8	.....
Asbury Park.	52	12	33.7	1.50		Fort Porter	51	10	31.2	1.25	
Bayonne	52	13	33.1	1.27		Fort Schuyler	53	12	34.0	1.31	
Belleville	49	13	31.3	1.26		Galway	44	3	28.0	2.69	
Belvidere	55	13	32.8	1.87		Geneva	46	-17	22.2	1.75	
Beverly *1.	51	10	30.4	0.90		Glen Falls	42	6	27.1	3.36	
Blairstown	56	16	37.1	2.72		Hess Road Sta'n	47	1	26.4	1.21	
Bridgeton	55	15	34.8	1.44		Honeymead Brook	49	3	27.7	3.45	
Bridgeton b	55	10	36.6	2.24		Humphrey	56	5	30.3	1.33	
Camden	47	7	28.7	1.00		Ithaca *	43	3	29.8	.....
Cape May C. H.	58	7	30.8	0.85		Jamestown *	44	2	24.7	5.33	
Deckertown	58	10	34.6	2.17		Le Roy	47	4	27.2	1.43	
Dover	49	10	31.1	2.13		Liberty	50	13	18.0	2.51	
Egg Harbor City	55	11	34.8	1.07		Lockport	46	-2	23.1	2.00	
Franklinville	51	10	33.8	2.62		Lowville *	44	-12	24.3	1.52	
Freehold	52	12	31.8	2.14		N'th Hammond	50	-14	17.6	1.34	
Gillette	52	12	33.2	1.81		Number Four	42	-14	20.4	3.37	
Highland Park	53	12	34.0	1.75		Oxford	44	3	24.4	1.06	
Hightstown	53	12	34.0	1.75		Palermo	42	-8	23.8	2.23	
Imlaystown	51	14	33.0	1.02		Pawling	42	-1	25.3	1.54	
Junction	50	10	32.0	1.04		Perry City	42	-1	25.3	1.54	
Lambertville	56	13	34.0	2.73							
Locktown	55	15	35.4	.....						
Moorestown	50	13	33.7	1.62							
Mount Holly	53	12	34.0	1.65							
Newark	51	13	33.0	1.77							
New Brunswick a.	48	7	29.3	0.86							
New Brunswick b.	51	14	35.2	.....						
Newton	51	14	35.2	.....						
Ocean City	52	15	35.5	2.32							
Oceanic	52	15	35.5	2.32							

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
New York—Cont'd.	°	°	°	Ins.	Ohio—Cont'd.	°	°	°	Ins.
Plattsburgh B'ks.	43	-10	19.2	2.47	Fostoria ¹	59	10	31.5	2.24
Port Jervis.	50	6	29.1	1.12	Garrettsville ¹	54	-3	28.9	3.42
Potsdam ¹	40	-13	17.1	2.96	Georgetown ¹	62	13	39.1	4.04
Poughkeepsie	51	0	27.5	1.44	Granville ¹	62	1	33.8	3.62
Quaker Street.	42	-6	22.0	2.50	Gratiot ¹	62	1	35.8	2.77
Rome.	55	15	24.4	2.77	Greenfield ¹	59	9	38.0	4.50
Romulus.	45	4	27.1	1.98	Greenville ¹	58	7	34.4	3.08
Schoadack Depot.	48	12	31.6	1.37	Hanging Rock ¹	57	14	39.1	2.57
Setauket ¹	48	12	31.6	1.40	Harbor ¹	57	7	30.9	3.10
Sherman.	50	-9	27.0	4.01	Hiram ¹	53	1	29.5	3.43
South Canisteo ¹	47	0	25.5	3.40	Jacksonborough ¹	66	14	35.6	3.95
Southeast Reserve ¹	44	-8	24.9	1.07	Kenton ¹	66	7	32.6	3.20
South Kortright ¹	44	-8	24.9	1.20	Leipsic ¹	58	10	33.0	2.54
Turin.	44	-13	20.5	4.33	Logan ¹	67	2	30.5	3.38
Utica.	49	-8	24.7	3.37	Lordstown ¹	55	0	30.8	2.87
Wappingers Falls.	44	-12	22.7	1.31	McArthur ¹	63	0	35.8	3.39
Watertown.	44	-12	22.7	2.24	Mansfield ¹	64	5	38.9	3.33
Waterliet Ars'l.	42	-2	23.3	1.35	Marietta ¹	63	12	35.5	2.93
West Chazy.	45	4	24.0	1.07	McConnelsville ¹	63	12	33.6	2.35
White Plains ¹	49	12	31.2	1.62	Napoleon ¹	53	12	33.6	2.35
Willetts Point.	51	7	33.4	1.70	New Alexandria ¹	56	7	35.0	2.54
North Carolina.					New Comerstown ¹	58	0	33.8	2.25
Asheville ¹	72	20	45.1	1.47	North Lewisburgh ¹	63	1	35.1	4.10
Bakersville ¹	66	15	38.8	1.26	O. S. University ¹	53	4	31.0	2.87
Bryson City ¹	68	14	42.6	3.22	Orangeville ¹	52	-1	30.1	2.80
Chapel Hill ¹	70	16	45.4	4.21	Piqua ¹	62	-1	30.1	2.80
Concord.	66	14	40.4	2.90	Pomeroy ¹	65	8	39.6	1.08
Currituck Inlet ¹	66	14	40.4	2.90	Portsmouth ¹	74	8	40.1	3.39
Douglas.	63	21	41.9	1.87	Portsmouth ¹	74	8	40.1	3.39
Fayetteville ¹	63	18	41.8	2.10	Sidney ¹	57	11	32.2	2.66
Hendersonville ¹	63	18	41.8	2.10	Tiffin ¹	57	11	32.2	2.66
Lenoir ¹	63	18	41.8	2.10	Upper Sandusky ¹	57	7	33.7	2.41
Lexington ¹	68	15	43.9	2.09	Van Wert ¹	60	7	32.0	2.37
Lillington ¹	68	15	43.9	2.09	Warren ¹	52	5	31.6	3.18
Livville ¹	59	7	38.3	1.29	Wauseon ¹	55	3	29.9	3.56
Littleton ¹	68	16	40.0	3.09	Waverly ¹	67	14	38.2	3.51
Louisburgh ¹	63	18	41.6	1.50	Waynesville ¹	60	1	35.3	3.17
Marion.	65	14	41.1	1.30	West Milton ¹	61	11	37.5	4.75
Mount Airy ¹	67	17	41.0	4.18	Weymouth ¹	57	1	32.0	2.14
Mount Holly ¹	69	16	44.1	2.79	Wheeler ¹	57	1	29.6	1.73
Mount Pleasant ¹	69	16	44.1	2.79	Youngstown ¹	53	8	33.8	2.22
Murphy ¹	70	18	45.4	4.08	Zanesville ¹	53	8	33.8	2.22
New Bern ¹	65	16	42.8	3.70	Oklahoma Ter.				
Oak Ridge ¹	64	12	41.8	2.30	Burnet ¹	72	20	44.6	1.35
Pittsburgh.	64	12	41.8	2.30	Fort Reno ¹	73	20	47.8	1.60
Raleigh ¹	68	17	45.0	2.87	Fort Sill ¹	73	24	47.8	1.60
Salisbury ¹	63	15	45.5	2.10	Gate City ¹	70	12	40.1	1.95
Saxton ¹	63	15	45.5	2.10	Guthrie ¹	70	12	40.1	1.95
Smithfield.	60	17	44.7	3.65	Keokuk Falls ¹	70	19	48.8	5.14
Wadeville ¹	68	17	45.0	3.49	Mangum ¹	80	23	39.9	0.24
Weldon ¹	65	19	42.4	2.90	Oregon.				
Willeyton.	65	16	41.6	4.10	Albany ¹	62	24	41.5	1.91
North Dakota.					Albany ¹	60	20	43.2	1.34
Ashley ¹	34	-31	8.8	0.60	Ashland ¹	60	21	43.0	0.33
Bathgate ¹	39	-27	7.0	0.60	Aurora ¹	63	26	44.7	1.39
Barrington ¹	36	-29	5.0	0.30	Bandon ¹	57	30	44.3	1.58
Bottineau ¹	43	-35	5.9	0.93	Brownsville ¹	57	30	44.3	1.58
Churches Ferry ¹	35	-31	3.2	0.60	Comstock ¹	62	22	42.3	1.83
Dickinson ¹	47	-19	16.4	0.60	Corvallis ¹	57	24	41.3	2.18
Ellendale ¹	47	-19	16.4	0.60	East Portland ¹	60	24	41.3	2.18
Fargo ¹	47	-19	16.4	0.60	Eola ¹	59	25	41.6	1.23
Fort Buford.	43	-25	12.6	0.35	Grants Pass ¹	73	29	49.1	0.30
Fort Pembina.	45	-25	12.6	0.35	Junction City ¹	50	30	39.4	0.95
Fort Yates.	39	-34	6.3	0.86	La Fayette ¹	60	32	39.3	1.40
Gallatin ¹	50	-20	15.0	0.86	Leland ¹	64	22	41.4	1.55
Grafton ¹	36	-31	7.9	0.25	McMinville ¹	56	27	42.6	1.53
Grand Forks ¹	40	-25	10.7	0.44	Monmouth ¹	58	28	40.8	1.08
Grand Rapids ¹	40	-25	10.7	0.44	Portland ¹	58	28	40.8	1.08
Hope ¹	36	-29	9.6	0.50	Riddles ¹	64	28	41.0	1.18
Jamestown ¹	54	-29	10.2	0.86	Roseburgh ¹	65	29	45.9	1.36
Kelso ¹	42	-26	11.3	0.98	Salem ¹	58	27	42.6	1.36
Lakota ¹	35	-33	6.9	0.84	Sheridan ¹	50	20	41.0	0.76
Medora ¹	35	-33	6.9	0.84	Silverton ¹	58	24	41.4	2.19
Milton ¹	35	-33	6.9	0.84	Siskiyou ¹	52	26	38.7	3.05
Minot ¹	35	-33	6.9	0.84	Springfield ¹	58	22	41.2	1.80
Napoleon ¹	33	-25	7.2	0.68	West Fork ¹	65	27	43.7	2.27
Power ¹	33	-25	7.2	0.68	Pennsylvania.				
Saint John ¹	33	-25	7.2	0.68	Allegheny Arsenal.	62	10	35.0	2.21
Saint Thomas ¹	33	-25	7.2	0.68	Altoona ¹	55	17	38.9	1.57
Valley City ¹	37	-29	11.4	0.42	Aqueduct ¹	55	14	31.9	0.80
Wahpeton ¹	44	-23	14.0	0.55	Bloomington ¹	49	6	27.9	4.03
Wild Rice ¹	37	-29	11.4	0.42	Blue Knob.	45	-6	26.5	4.03
Willow City ¹	35	-41	0.4	0.34	Brookville ¹	54	16	32.8	1.15
Woodbridge ¹	41	-38	2.6	0.34	Browers Lock.	54	16	32.8	1.15
Ohio.					Carlisle ¹	54	16	32.8	1.15
Akron ¹	54	8	32.4	3.45	Clarion ¹	54	16	32.8	1.15
Ashland.	54	8	32.4	3.45	Coatesville ¹	55	11	32.8	1.16
Athens ¹	63	3	31.0	2.54	Confidence ¹	55	11	32.8	1.16
Bangorville ¹	56	8	32.2	3.49	Coopersburgh ¹	54	11	32.8	1.16
Bellvue ¹	56	8	32.2	3.49	Corry ¹	57	-3	28.0	3.71
Bement ¹	60	4	30.2	1.00	Davis Island Dam ¹	57	-3	28.0	3.71
Caledonia ¹	54	6	32.8	2.67	Drifton ¹	48	4	27.2	0.56
Canton ¹	54	6	32.8	2.67	Doylestown.	48	4	27.2	0.56
Carrollton.	57	3	32.5	3.24	Du Bois ¹	48	4	27.2	0.56
Celina ¹	63	12	36.8	2.80	Dyberry ¹	48	4	27.2	0.56
Circleville ¹	58	15	36.2	2.58	East Mauch Chunk ¹	53	9	31.7	1.14
Clarksville ¹	58	15	36.2	2.58	Easton ¹	48	10	31.5	1.08
Cleveland.	56	10	32.4	2.06	Edinborough ¹	43	-4	26.7	1.00
Columbus Barracks.	63	11	36.7	3.42	Emporium ¹	51	5	31.3	3.77
Dayton ¹	58	8	37.2	3.09	F'ks of Nesaminy ¹	51	5	31.3	3.77
Demos ¹	58	10	34.6	2.42					
Ellsworth.	60	5	33.0	2.54					
Elyria.	60	5	33.0	2.54					
Findlay ¹	61	11	31.9	3.18					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
<i>Pennsylvania—Cont.</i>	°	°	°	<i>Ins.</i>	<i>S. Dakota—Cont'd.</i>	°	°	°	<i>Ins.</i>
Frankford Arsenal.	53	13	32.6	0.85	Forest City†	59 ^g	-9 ^g	22.4 ^g	0.27
Frederick.	50	0	28.5	0.83	Fort Meade.	59	-12	25.2	0.27
Freeport†	50	0	28.5	3.17	Fort Randall.	55	-7	25.6	0.37
Girardville†	50	9	30.3	1.40	Fort Sully.	51	-10	18.0	0.50
Grampian Hills*†	48	0	28.5	3.17	Frankfort†	46	-25	16.2	1.17
Greensborough†	50	9	30.3	2.20	Gary†	46	-24	15.2	0.45
Hamburg.	55	12	32.8	0.44	Howard†	49	-15	19.9	0.79
Hollidaysburgh†	57	1	32.6	2.37	Kimball†	53	-12	20.0	0.91
Honesdale†	48	1	27.6	2.02	Millbank†	57	-24	12.9	1.41
Hulmeville.	53	14	33.5	1.64	Mitchell†	55	-10	20.9	1.52
Huntingdon†	58	9	33.1	1.86	Oelrichs†	54	-8	23.3	1.15
Johnstown†	49	2	27.6	2.97	Onida†	45	-15	13.3	0.60
Kane.	49	2	27.6	2.97	Parker†	48	-13	21.1	0.40
Kennett Square.	51	15	29.5	1.96	Parkston*†	50	-4	23.7	0.55
Kilmer†	51	15	29.5	1.96	Saint Lawrence*†	48	-8	20.0	0.55
Lancaster.	59	13	33.3	1.12	Sioux Falls†	46	-16	20.4	0.82
Lansdale.	55	13	33.0	0.75	Spearsfish†	60	-5	27.1	0.74
Lebanon†	55	13	33.0	0.95	Tyndall†	50	-7	23.8	0.25
Le Roy†	43	4	26.8	1.09	Vermillion†	49	-9	23.0	0.54
Ligonier†	60	-6	33.2	2.59	Watertown†	50	-23	19.0	0.76
Lock Haven†	51	7	31.5	1.37	Webster†	47	-26	18.9	1.43
Lock No. 4†	60	2	34.0	2.44	Wentworth†	32 ^g	-15 ^g	12.9 ^g	0.75 ^g
Mahoning†	58	9	30.3	3.33	Wessington Sp'gs†	50	-18	19.9	0.66
McConnellsburgh†	60	2	34.0	1.47	Wolsey*†	45	-17	16.2	0.62
Meadville.	58	-9	30.3	0.	<i>Tennessee.</i>				
New Castle†	54	5	34.9	2.56	Andersonville*†	64	20	43.4	1.51
Oil City†	54	5	34.9	2.07	Ashwood*†	64	25	40.5	3.71
Ottaville.	51	11	34.2	1.11	Austin*†	68	23	45.0	1.95
Parkers Landing†	51	11	34.2	2.41	Bethel Springs*†	66	28	44.8	3.77
Philadelphia a	51	11	34.2	1.83	Carthage†	66	28	44.8	3.77
Philadelphia b	58	15	36.0	1.10	Charleston†	67	23	45.1	2.78
Philadelphia c	53	14	34.0	0.81	Clarksville†	67	23	45.1	2.78
Phoenixville.	54 ^g	14 ^g	34.9 ^g	1.25	Clinton†	67	23	45.1	2.78
Pleasant Mount.	54 ^g	14 ^g	34.9 ^g	2.15	Columbia†	67	23	45.1	2.78
Point Pleasant.	51	12	34.2	1.29	Covington a†	67	28	48.0	3.50
Pottstown.	51	12	34.2	2.22	Dunlap†	70	20	48.1	4.95
Quakertown†	52	8	31.9	1.35	Dyersburgh†	66	26	48.5	3.44
Reading†	52	8	31.9	0.54	Fayetteville*†	66	26	47.5	4.62
Ridgway†	52	8	31.9	2.44	Flora Station*†	64	24	45.3	3.28
Saegertown†	53	-18	29.0	4.24	Franklin†	67	26	45.5	3.44
Salem Corners†	46	-1	24.5	1.02	Greenville*†	61	20	41.2	2.40
Saltsburg†	46	-1	24.5	2.83	Harrisman†	68	22	44.0	1.53
Seisholtzville.	50	5	30.8	1.46	Jacksboro*†	59 ^g	22 ^g	40.2 ^g	2.50
Selins Grove†	50	5	30.8	0.88	Jackson*	56	25	45.5	3.22
Smiths Corners.	50	5	30.8	1.25	Johnson City†	66	16	38.7	1.81
Somerset†	54	-15	30.1	2.95	Johnsonville†	66	16	38.7	1.81
South Eaton.	52	6	30.1	0.91	Kingston†	66	16	38.7	1.81
State College†	52	1	30.1	1.73	Loudon†	66	16	38.7	1.81
Stoysstown†	52	1	30.1	3.02	Lynnville*†	64	25	44.9	4.84
Swarthmore.	53	14	35.4	0.43	McMinnville*†	66	27	47.8	3.97
Uniontown†	60	0	36.9	2.62	Missionary Ridge*†	66	28	45.2	3.97
Warren†	50	2	26.9	3.20	Newport†	63	22	43.2	2.97
Wellsbrough*†	50	2	26.9	2.21	Nunnely*†	66	25	47.0	3.83
West Chester.	52	12	33.6	1.31	Parkville*†	66	22	45.4	2.86
West Newton†	52	12	33.6	0.87	Riddletown†	64	21	44.4	3.57
Westtown†	52	11	33.4	1.66	Rockwood†	64	21	44.4	3.57
Wilkes Barre†	57	11	33.3	1.11	Rogersville*†	61	20	41.3	3.17
Williamsport.	55	12	33.4	2.83	Rugby†	61 ^g	18 ^g	40.3 ^g	2.83 ^g
Wysox†	48	8	29.1	1.39	Savannah*†	69	26	48.4	4.74
York.	53 ^g	5 ^g	30.6 ^g	0.10 ^g	Sharp*†	70	24	48.6	5.44
<i>Rhode Island.</i>					Strawberry Plains†	70	24	48.6	5.44
Bristol†	46	9	30.3	1.46	Waynesborough*†	63	23	44.0	4.90
Fort Adams.	50	11	33.2	0.70	<i>Texas.</i>				
Kingston a	48	5	29.6	1.87	Arthur City†	75	40	57.1	2.22
Kingston b†	46	4	29.3	1.72	Austin a†	75	40	57.1	2.44
Newport.	48	10	33.4	1.72	Austin b†	76	40	59.4	0.10
Olneyville.	49	8	32.0	1.74	Big Spring.	78 ^g	27 ^g	53.9 ^g	0.34
Pawtucket.	46	8	30.6	1.72	Brady†	83	44	62.1	2.72
Providence a.	50	5	29.0	1.55	Brasoria†	78	39	61.9	2.44
Providence b.	46	6	28.0	1.84	Brenham†	79	29	53.5	0.53
Providence c.	46	6	28.0	1.84	Brownwood†	79	29	53.5	0.53
<i>South Carolina.</i>					Burnet*†	74	34	54.0	2.00
Anderson†	67	22	47.8	5.20	Camp Eagle Pass.	90	34	61.8	0.00
Belmont†	67	22	47.8	5.41	Camp P. Colorado.	78	24	51.2	0.60
Canden†	68	20	47.7	6.57	Childress†	75	26	45.2	T.
Cheraw a†	68	20	47.7	5.65	College Station.	88	39	62.4	1.96
Cheraw b†	68	20	47.7	6.27	Colorado b	88	39	62.4	1.96
Conway.	72	23	48.2	3.05	Columbia†	79	45	63.6	2.77
Effingham†	69	22	45.7	6.54	Corsicana a†	76 ^g	28 ^g	54.4 ^g	1.03
Evergreen.	69	22	45.7	6.04	Corsicana b†	75	30	53.5	1.28
Greenville†	69	22	45.7	3.67	Cuero b†	81	44	63.0	1.09
Kitchens Mills†	69	22	49.0	3.97	Dallas b†	83	13	59.1	0.81
Mount Carmel†	69	22	49.0	3.68	Devine.	82	39	62.2	0.18
Nichols†	69	22	49.0	6.19	Duval*†	80	40	59.6	1.10
Port Royal*†	72	34	53.0	1.08	Forestburgh†	74	32	55.2	0.75
Simpsonville*†	69	19	45.2	3.54	Fort Bliss.	73	24	49.8	1.78
Statesburgh†	69	27	48.8	4.23	Fort Brown.	90	54	68.8	0.86
Tillers Ferry†	71	23	51.6	2.05	Fort Clark.	80	40	59.8	0.46
Trial.	68	25	46.9	2.84	Fort Hancock.	79	12	47.8	0.82
Wallhalla.	68	25	46.9	5.30	Fort McIntosh.	90	47	66.9	1.41
Waterlee†	69	18	48.0	5.09	Fort Ringgold.	90	48	69.2	0.15
Winnabough†	69	18	48.0	5.09	Fredericksb'gh*†	79	34	56.2	0.53
<i>South Dakota.</i>					Gainesville†	74	26	49.8	1.17
Aberdeen†	49	-18	17.2	0.03	Gallinas†	86	40	60.6	0.44
Alexandria†	51	-12	22.7	0.69	Graham†	76	25	51.1	0.50
Britton†	43	-24	13.6	0.81	Grape Vine†	74	27	52.2	0.55
Brookings†	48	-19	18.0	0.36	Hallettsville*†	80	40	64.1	0.91
Castlewood†	46 ^g	-17 ^g	14.8 ^g	0.57	Hartley†	67	17	42.6	0.04
Clark†	50	-23	17.9	0.82	Haskell†	67	32	49.6	0.49
Cross*†	61	4	23.9	0.25	Haymond.	67	32	49.6	0.49
De Smet*†	46	-23	18.2	0.35	Hearne†	72	42	58.1	0.85
Elkton*†	38	-14	16.5	1.61	Highland.	79	29	57.0	0.30
Faulton*†	42	-21	13.5	1.01	Houston†	75	42	61.8	1.13
Flandreau†	45	-19	19.2	1.08	Huntville†	74	33	58.2	2.00
Forestburg†	49	-14	20.0	1.01	Kent.	74	33	58.2	2.00

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Texas—Cont'd.					Washington—Cont'd.				
Llano f.....	81	34	57.8	0.36	Fort Canby.....	63	24	40.9	5.27
Longview f.....	76	32	54.6	3.12	Fort Simcoe *1.....	60	28	41.3	0.18
Menardville *1.....	82	46	64.0	0.09	Fort Spokane.....	52	7	34.0	0.55
Menquite f.....	79	29	53.8	0.29	Fort Townsend.....	52	23	39.9	1.78
Mountain Springs f.....	76	29	52.7	1.16	Fort Walla Walla.....	54	22	40.6	0.61
Nacogdoches f.....	76	29	52.7	1.16	Lapush f.....	53	20	35.0	2.50
New Braunfels f.....	78	32	55.4	3.99	Madrona f.....	56	28	42.0	1.56
New Urm f.....	78	32	55.4	3.99	Pomeroy f.....	58	25	40.0	1.04
Oehlert f.....	81	39	61.2	1.71	Rosalia f.....	58	25	40.0	1.04
Panther *1.....	78	32	54.3	0.31	Seattle f.....	65	28	43.4	0.55
Quannah f.....	74	34	54.3	0.33	Sehome f.....	55	27	40.2	1.94
Roby f.....	75	25	50.0	0.90	Tacoma f.....	55	27	41.2	1.82
Round Rock f.....	75	25	50.0	0.90	Vancouver B'ks.....	55	27	41.2	1.82
San Antonio a.....	81	43	62.1	0.59	Vashon.....	55	26	40.9	0.11
San Antonio b.....	83	43	63.1	0.48	Waterville f.....	46	4	29.9	0.70
Sierra Blanca a.....	73	24	50.0	0.63	West Virginia.				
Sierra Blanca b.....	73	24	50.0	0.63	Alderson f.....	60	10	39.4	2.40
Silver Falls f.....	73	23	47.8	0.10	Beverly f.....	65	12	39.0	2.40
Sugar Land f.....	79	38	61.6	0.60	Buckhannon a.....	62	—	37.1	2.05
Temple f.....	70	32	53.3	1.43	Buckhannon b.....	62	—	37.1	2.15
Van Horn.....	73	29	51.6	0.87	Charleston f.....	62	6	43.7	3.18
Venus f.....	73	29	51.6	0.87	Elkhorn f.....	62	12	41.2	1.00
Waco f.....	78	34	56.4	1.43	Ellis f.....	55	10	34.8	2.77
Wichita Falls f.....	78	19	49.2	0.20	Fairmont f.....	67	2	38.2	2.70
Utah.					Glenville f.....	67	2	38.2	2.70
Blue Creek *1.....	54	11	29.7	1.15	Grafton f.....	65	—	35.8	2.87
Cisco f.....	64	25	41.9	0.65	Harpers Ferry f.....	65	—	35.8	2.87
Corinne *1.....	52	8	27.4	1.25	Huntington f.....	72	19	41.8	2.23
Deseret f.....	53	16	35.3	0.68	Kingwood f.....	62	19	35.9	1.72
Fort Douglas.....	60	—	30.4	0.30	Martinsburg f.....	54	—	35.2	1.35
Fort Du Chene.....	57	—	30.4	0.30	Moorefield f.....	65	—	35.0	1.72
Green River f.....	63	21	39.9	0.38	Morgantown a.....	70	—	37.0	2.05
Grouse Creek f.....	63	21	39.9	0.38	Morgantown b.....	70	—	37.0	2.05
Kelton *1.....	54	4	34.3	0.25	Natallburgh.....	71	16	37.8	0.81
Lake Park.....	56	14	31.1	0.51	Parkersburg f.....	54	5	37.3	4.27
Levan f.....	46	7	26.0	0.55	Piedmont *1.....	58	—	33.1	3.06
Loa f.....	53	—	29.8	0.28	Pleasant Hill *1.....	60	—	30.6	3.06
Lone f.....	58	—	31.0	1.45	Point Pleasant f.....	56	—	30.6	3.06
Moab f.....	73	22	40.1	0.71	Romney *1.....	60	—	30.6	3.06
Mount Carmel *1.....	60	—	35.9	1.16	Rowlesburg f.....	60	—	30.6	3.06
Nephi f.....	58	—	35.9	1.16	Spencer f.....	60	—	30.6	3.06
Ogden a.....	55	—	37.3	1.22	Tannery *1.....	55	—	34.4	3.50
Ogden b.....	55	—	37.3	1.22	Weston f.....	55	—	34.4	3.50
Park City f.....	54	—	31.9	0.50	Wheeling a.....	61	12	38.9	2.65
Parowan f.....	54	—	31.9	0.50	Wheeling b.....	61	12	38.9	2.65
Promontory *1.....	50	—	27.5	0.45	White Sul. Springs f.....	61	12	38.9	2.65
Provo City f.....	50	—	27.5	0.45	Wisconsin.				
Richfield f.....	60	10	37.4	0.50	Amherst.....	45	—	20.0	0.85
Scodief f.....	45	—	34.2	0.85	Appleton f.....	42	—	24.2	1.19
Snowville f.....	47	14	32.3	0.34	Baraboo f.....	45	—	24.2	1.19
Soldiers Summit f.....	47	14	32.3	0.34	Barron f.....	42	—	24.2	1.19
Stockton f.....	47	14	32.3	0.34	Bayfield.....	42	—	24.2	1.19
Terrace f.....	47	14	32.3	0.34	Beaver Dam.....	44	—	24.2	1.19
Thistle f.....	47	14	32.3	0.34	Beloit.....	44	—	24.2	1.19
Vermont.					Berlin.....	44	—	24.2	1.19
Brattleborough a.....	48	—	25.4	2.22	Black River Falls f.....	40	—	21.3	1.71
Burlington f.....	48	—	25.4	2.22	Butternut f.....	40	—	21.3	1.71
Chelsea *1.....	41	—	18.8	1.85	Cadiz.....	44	—	24.2	1.19
Cornwall.....	48	—	25.4	2.22	Centralia.....	44	—	24.2	1.19
Enosburgh Falls f.....	49	—	26.0	2.00	Chippewa Falls.....	44	—	24.2	1.19
Hartland f.....	49	—	26.0	2.00	Columbia.....	44	—	24.2	1.19
Jacksonville.....	50	—	26.0	2.00	Crandon f.....	44	—	24.2	1.19
Lanesburg f.....	48	—	25.4	2.22	Delavan f.....	44	—	24.2	1.19
Saxtons River f.....	48	—	25.4	2.22	Delavan (near) *1.....	44	—	24.2	1.19
Stratford *1.....	46	—	21.1	1.50	De Pere.....	44	—	24.2	1.19
Vernon *1.....	46	—	21.1	1.50	Dodgeville f.....	43	—	22.8	1.60
Weathersfield C're.....	44	—	19.8	1.84	Eau Claire a.....	44	—	24.2	1.19
Wells.....	46	—	21.1	1.50	Embarras *1.....	44	—	24.2	1.19
Virginia.					Florence f.....	45	—	24.2	1.19
Abingdon f.....	73	12	40.1	1.83	Fond du Lac f.....	42	—	24.2	1.19
Ashland *1.....	68	3	39.4	1.47	Hammond f.....	42	—	24.2	1.19
Bedford City f.....	63	18	41.1	2.99	Harvey f.....	42	—	24.2	1.19
Big Stone Gap f.....	64	14	38.8	3.84	Hayward f.....	44	—	24.2	1.19
Birdsnest *1.....	58	20	40.9	3.25	Hillsborough.....	46	—	25.6	1.21
Blackburn f.....	62	12	38.5	1.32	Janesville.....	45	—	24.2	1.19
Cape Charles *1.....	59	20	40.7	3.34	Juneau f.....	42	—	24.2	1.19
Charlottesville.....	67	7	40.0	2.32	Koepnick *1.....	44	—	24.2	1.19
Christiansburg f.....	67	7	40.0	2.32	Lincoln *1.....	44	—	24.2	1.19
Clarksville f.....	63	—	35.6	1.90	Madison.....	40	—	24.2	1.19
Dale Enterprise f.....	63	—	35.6	1.90	Manitowoc.....	40	—	24.2	1.19
Danville f.....	62	18	40.6	3.41	Meadow Valley f.....	47	—	24.0	1.77
Fort Monroe.....	61	8	35.8	3.70	Medford a.....	47	—	24.0	1.77
Fort Myer.....	61	8	35.8	3.70	Medford b.....	47	—	24.0	1.77
Lexington f.....	66	4	38.3	3.42	Menomonee.....	50	—	21.6	1.90
Marion f.....	60	14	39.1	1.79	Neillsville f.....	48	—	23.6	2.24
Nottaway C. H.....	70	13	39.5	3.82	New Holstein f.....	43	—	23.6	2.24
Petersburg f.....	70	16	39.1	3.28	Oconomowoc f.....	40	—	23.6	2.24
Richmond f.....	74	16	43.9	2.71	Oconto.....	47	—	23.6	2.24
Salem f.....	65	18	41.7	2.94	Oshkosh f.....	47	—	23.6	2.24
Spottsville f.....	65	16	40.2	3.88	Pepin.....	52	—	24.4	2.33
Stauntonville f.....	63	11	38.9	2.40	Peshigo.....	44	—	21.5	1.91
Staunton f.....	66	0	37.1	2.45	Phillips f.....	42	—	21.5	1.91
Woodstock f.....	66	0	37.1	2.45	Plover f.....	42	—	21.5	1.91
Washington.					Portage f.....	42	—	21.5	1.91
Aberdeen f.....	59	29	42.0	4.95	Prairie du Chien.....	57	—	26.6	1.21
Centerville f.....	59	23	41.7	0.55	Richland Centre f.....	58	—	26.2	1.23
Chehalis f.....	59	24	41.8	3.32	Shawano.....	51	—	24.2	1.29
Chelan f.....	50	12	29.4	0.43	Shell Lake.....	43	—	20.5	1.01
Conlee City f.....	52	6	31.0	0.97	Sparta f.....	49	—	23.0	1.92
Dayton.....	60	22	39.0	1.03	Viroqua.....	42	—	24.2	1.92
Doe Bay f.....	54	32	41.7	1.55	Watertown.....	46	—	27.1	1.45
East Sound f.....	55	30	42.3	1.15	Waukesha f.....	46	—	27.1	1.45
Ellensburg f.....	54	14	35.2	0.27					

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean			Max.	Min.	Mean	
Wisconsin—Cont'd.					Wyoming—Cont'd.				
Westfield.....	44	—	23.7	1.61	La Barge f.....	58	—	22.8	0.45
Weston *1.....	44	—	23.7	1.61	Lander.....	52	—	29.2	0.36
Whitehall f.....	53	—	24.2	1.80	Laramie b.....	49	—	25.0	0.36
Wittenberg f.....	46	—	23.1	1.41	Lusk f.....	54	—	26.0	0.17
Wyoming.					Saratoga f.....	48	—	26.8	0.47
Atlantic City *1.....	48	4	28.0	0.60	Sundance.....	50	—	22.2	0.46
Blitter Creek f.....	53	—	30.7	1.71	Wheatland f.....	61	5	34.2	0.90
Camp Pilot Butte.....	54	—	30.7	1.71	Mexico.				
Casper f.....	77	—	35.4	0.35	La Logia.....	82	46	65.5	0.33
Evanston.....	77	—	35.4	0.35	Leon de Aldamas.....	77	45	62.4	0.24
Fort D. A. Russell.....	57	4	29.8	1.00	Puebla.....	73	34	59.5	0.65
Fort Fetterman f.....	71	9	35.9	0.62	New Brunswick.				
Fort Laramie f.....	58	0	29.0	0.22	Saint John.....	42	—	22.6	1.17
Fort McKinney.....	58	3	28.6	1.35	West Indies.				
Fort Washakie.....	54	—	26.9	0.30	Grand Turk Island.....	68	48	60.1	1.84
Fort Yellowstone.....	43	4	24.7	2.10	Hamilton, Bermuda.....	68	48	60.1	5.57

Reports received too late to be used in general discussion of weather for February, 1892.

Alabama.					Montana—Cont'd.				
Warrior f.....				3.90	Virginia City f.....	48	2	28.0	0.04
Arizona.					White Sul. Sp'gs f.....				
Phoenix a f.....	81	31	57.8	2.20	Nebraska.				
Tempe.....	81	34	55.8	1.88	Harvard.....				
Wood Cañon.....				4.00	New Hampshire.				
California.					Concord b.....				
Campo f.....				4.55	New Mexico.				
Yountville *.....		34		5.18	Las Cruces f.....				
Florida.					New York.				
Mullet Key f.....				0.84	Arkwright f.....				
Idaho.					Brentwood.....				
Elk City f.....	40	—	21.7	3.94	Brookport.....				
Payette f.....	47	—11	22.2	0.44	Dunkirk a f.....				
Illinois.					Hammondport.....				
Paris f.....	58	10	37.7	1.31	Lyons f.....				
Iowa.					Lyon Mountain a f.....				
Charles City f.....	44	—12	23.4	0.73	Peekskill.....				
Sac City f.....	45	—12	20.2	0.55	Rondout f.....				
Michigan.					Saratoga f.....				
Albion f.....	51	—2	31.4	7.30	Wedgwood f.....				
Montana.					North Carolina.				
Boulder Valley f.....	48	—2	28.2	0.62	Highlands f.....				
Choteau f.....	66	—19	25.4	0.74	Morganton f.....				
Cokedale * f.....	50	8	30.7	0.70	Southern Pines f.....				
Dearborn Canyon f.....	47	—8	27.2	0.81	South Carolina.				
Deer Lodge City f.....	65	0	32.5	0.35	Aiken f.....				
Fort Logan f.....	52	—3	26.7	0.20	Texas.				
Glendive f.....	51	—13	20.5	0.80	Durham f.....				
Great Falls f.....	84 f	—15	36.2	0.41	Fort Worth f.....				
Livingston f.....		7	30.5	0.50	Odessa f.....				
Martinsdale f.....	50	—13	27.4	1.35	San Angelo f.....				
Powder River f.....	52	—15	20.6	0.45	Mexico.				
					Topolobampo * f.....				

Data from Canadian stations for the month of February, 1892.

Station.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.	
Saint John's, N. F.....	Inches. 29.88	Inches. 30.03	Inches. + .06	° 29.6	° + 7.4	Inches. 7.76	Inches. + 0.57	ne.
Sydney, N. S.....	29.96	30.02	+ .06	25.5	+ 7.0	4.76	+ 0.57	n.
Anticosti, Gulf of St. L.....	.....	.....	.....	.....	.....	.....	.....	.....
Halifax, N. S.....	29.93	30.07	+ .05	24.6	+ 3.6	2.60	- 2.10	n.
Grand Manan, N. B.....	30.00	30.05	.....	25.8	.....	1.84	- 1.72	e.
Yarmouth, N. S.....	29.98	30.06	+ .02	25.5	0.0	2.57	- 3.25	ne.
Saint Andrews, N. B.....	30.02	30.07	.....	22.8	.....	2.72	- 1.04	n.
Charlottetown, P. E. I.....	30.03	30.07	.....	22.2	.....	1.28	- 2.42	nw.
Chatham, N. B.....	30.08	30.10	+ .09	17.8	+ 8.3	2.08	- 1.23	ne.
Father Point, Que.....	30.12	30.15	+ .12	12.0	+ 2.0	1.62	0.00	w.
Quebec, Que.....	29.82	30.47	+ .13	15.5	+ 5.5	1.53	- 1.86	ne.
Montreal, Que.....	29.94	30.16	+ .10	16.2	+ 3.2	3.27	+ 0.45	ne.
Rockliffe, Ont.....	29.60	30.15	+ .09	13.0	+ 6.5	1.54	- 0.78	se.
Kingston, Ont.....	29.82	30.16	+ .08	18.1	+ 1.8	2.29	- 0.15	ne.
Toronto, Ont.....	29.74	30.15	+ .05	24.4	+ 3.9	2.25	- 0.06	ne.
White River, Ont.....	28.76	30.22	.....	3.4	.....	0.03	.....	n.
Port Stanley, Ont.....	29.45	30.12	.....	26.2	.....	3.12	+ 0.20	e.
Saugeen, Ont.....	29.39	30.15	+ .09	22.5	+ 5.0	2.93	+ 0.49	e.

Data from Canadian stations for the month of February, 1892—Continued.

Station.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.	
Parry Sound, Ont.....	Inches. 29.41	Inches. 30.15	Inches. + .09	° 17.5	° + 5.5	Inches. 2.56	+ 0.16	se.
Port Arthur, Ont.....	29.42	30.17	+ .06	10.0	+ 4.5	0.32	- 1.01	n.
Winnipeg, Man.....	29.30	30.21	+ .05	- 0.2	+ 4.8	0.60	- 0.57	nw.
Minnedosa, Man.....	28.20	30.18	+ .03	- 2.0	+ 4.0	0.29	- 0.69	nw.
Qu'Appelle, Assiniboia..	27.71	30.17	+ .03	0.4	+ 2.9	0.48	- 0.19	nw.
Medicine Hat, Assiniboia	27.62	30.07	- .07	15.0	+ 4.5	0.40	- 0.04	n.
Swift Current, Assiniboia	27.36	30.13	- .01	8.6	+ 2.0	0.94	+ 0.29	nw.
Calgary, Alberta.....	26.29	30.02	- .07	16.3	+ 6.8	0.03	- 0.73	nw.
Prince Albert, Saskatch'n	.....	.....	.....	.....	.....	.....	.....	.....
Esquimalt, B. C.....	30.00	30.03	+ .19	41.4	+ 7.4	0.50	- 1.82	n.
Stony Mountain, Man...	.....	.....	.....	.....	.....	.....	.....	.....
Port Moody, B. C.....	.....	29.94	+ .10	38.9	+ 5.7	5.46	+ 0.37	e.
St. Albans, Man.....	28.83	.....	+ .03	1.1	+ 3.9	0.89	+ 0.30	.....
Edmonton, Alberta.....	27.56	30.07	.....	7.4	.....	1.30	+ 0.84	nw.
Battleford, Saskatchewan	28.26	30.12	.....	7.3	.....	0.04	.....	se.
Grindstone, Gulf St. L...	.....	.....	.....	.....	.....	.....	.....	.....
Hamilton, Bermuda.....	29.84	30.00	.....	59.5	.....	5.86	.....	nw.

Table of miscellaneous meteorological data for February, 1892—Weather Bureau observations.

Districts and stations.	Elevation above sea level, feet.	Length of record, years.	Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.					Humidity and precipitation.					Wind.			Mean temperature data since opening of station.													
			Mean pressure, 8 a. m. and 8 p. m. - 2.	Mean reduced.	Departure from normal.	Mean max. and min. - 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.	Days with or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.		Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Highest for month.	Year.	Lowest for month.	Year.	
																						Miles per hour.	Direction.									
New England.																																
Eastport	53	19	30.02	30.08	+ .12	29.95	+ 1.3	42	15	29	2	28	19	22	16	73	1.77	- 2.4	12	9,821	ne.	60	ne.	11	6	13	10	6.3	27.5	1877	16.7	1875
Portland	99	21	30.01	30.12	+ .11	29.96	+ 0.9	44	25	31	1	17	18	36	17	74	2.18	- 1.6	11	5,521	nw.	45	ne.	11	14	4	11	5.2	31.8	1877	19.2	1875
Manchester	247	5	30.07	30.13	.....	29.96	.....	48	23	33	.....	7	18	32	17	74	2.18	.....	13	5,537	nw.	24	nw.	13	10	7	12	5.6	28.2	1890	20.7	1889
Northfield	872	2	30.18	30.18	.....	29.96	.....	44	23	33	.....	7	18	32	11	74	1.73	.....	10	5,117	n.	32	n.	15	6	9	14	6.4	22.2	1890	11.6	1889
Boston	135	22	30.00	30.14	+ .09	29.94	+ 0.6	46	15	34	5	17	23	31	21	78	2.13	- 1.6	10	8,115	nw.	32	w.	13	10	5	14	5.8	33.2	1890	20.5	1885
Nantucket	14	6	30.09	30.10	.....	31.4	.....	47	15	36	9	13	27	25	36	79	1.46	.....	9	10,228	nw.	49	se.	11	10	9	5	5.7	35.6	1890	27.9	1889
Woods Hole	22	14	.....	.....	.....	31.0	+ 0.5	48	15	37	10	17	25	24	.....	.....	1.95	- 1.6	9	10,860	nw.	48	nw.	13	8	6	15	6.9	35.7	1880	24.1	1875
Vineyard Haven	10	0	.....	.....	.....	35.4	.....	54	19	41	10	17	30	30	.....	.....	1.03	.....	12	.....	nw.	.....	.....	10	18	15	.....	38.4	1890	29.9	1889	
Block Island	27	12	30.10	30.13	+ .06	32.1	+ 0.6	46	15	37	10	17	30	30	.....	.....	1.35	- 3.6	8	14,235	ne.	64	ne.	27	7	7	15	6.2	37.2	1890	24.2	1885
Narragansett Pier	22	10	.....	.....	.....	31.4	+ 2.3	51	9	39	7	13	23	38	.....	.....	1.35	- 3.9	5	.....	ne.	.....	.....	12	3	14	.....	35.5	1890	22.4	1885	
New Haven	107	20	30.01	30.13	+ .04	31.2	+ 2.7	50	8	38	8	13	25	28	22	74	1.56	- 2.8	11	6,644	ne.	29	nw.	13	7	9	13	5.9	35.6	1877	19.7	1885
New London	47	23	30.08	30.13	+ .05	31.2	+ 0.7	49	8	38	7	13	25	32	21	72	1.71	- 2.4	9	5,878	nw.	30	nw.	13	8	7	14	6.1	36.8	1890	27.2	1885
Md. Atlantic States.																																
Albany	85	19	30.07	30.17	+ .09	30.0	+ 0.2	46	23	33	0	6	19	31	20	82	2.13	- 0.5	10	4,935	nw.	30	n.	27	6	10	13	6.6	33.0	1884	14.7	1885
New York, N. Y.	185	23	30.04	30.14	+ .03	33.2	+ 1.0	51	18	39	12	13	27	32	25	74	1.27	- 3.6	9	9,571	ne.	36	nw.	15	5	7	17	6.6	40.4	1890	23.1	1885
Harrisburg	377	4	30.75	30.17	.....	32.6	.....	50	18	39	11	13	27	32	24	72	1.02	.....	12	6,050	e.	36	w.	12	7	15	6	6.5	37.0	1890	25.2	1889
Philadelphia	117	22	30.03	30.16	+ .03	35.2	+ 0.9	54	8	40	14	13	29	39	25	71	0.98	- 2.4	9	8,982	ne.	44	nw.	15	8	12	9	6.2	41.4	1890	23.4	1885
Atlantic City	53	19	30.09	30.14	+ .04	34.9	+ 0.9	57	8	40	10	13	29	32	30	83	1.43	- 2.0	10	11,302	ne.	40	nw.	15	8	15	15	6.4	41.2	1890	25.7	1885
New Brunswick	.....	.....	.....	.....	.....	33.2	.....	52	8	40	12	13	27	32	.....	.....	1.81	.....	10	.....	nw.	.....	.....	12	3	12	.....	.....	.....	.....	.....
Baltimore	179	22	30.05	30.16	+ .03	36.8	+ 0.2	57	8	43	14	13	31	31	28	78	2.41	- 1.3	14	6,410	ne.	36	nw.	12	7	10	12	5.9	43.4	1890	28.5	1885
Washington, D. C.	112	23	30.04	30.16	+ .03	37.0	+ 0.9	61	2	44	6	6	30	34	27	73	3.64	+ 0.2	12	5,966	ne.	39	nw.	15	7	9	13	6.1	43.4	1890	26.9	1885
Cape Henry	18	.....	.....	.....	.....	42.3	+ 0.9	64	19	50	20	13	34	31	.....	.....	3.66	+ 0.1	13	.....	ne.	.....	.....	9	4	16	.....	52.2	1890	35.5	1885	
Lynchburg	685	21	30.41	30.17	+ .03	40.6	+ 0.3	67	2	49	16	6	32	40	28	68	3.11	+ 0.5	10	3,687	nw.	24	nw.	12	9	10	10	5.3	47.2	1890	31.6	1885
Norfolk	43	22	30.08	30.13	- .01	42.0	+ 1.7	65	2	49	19	13	36	31	32	75	5.32	+ 1.5	12	7,683	n.	42	nw.	13	10	7	12	5.8	52.2	1890	37.2	1885
S. Atlantic States.																																
Charlotte	773	14	30.30	30.14	- .01	45.6	+ 0.3	68	2	54	30	13	37	31	37	82	3.35	- 1.2	10	6,461	ne.	32	n.	12	16	3	10	4.3	52.8	1890	38.5	1885
Hatteras	11	13	30.10	30.12	- .01	45.1	+ 2.6	60	15	50	24	13	40	25	42	89	7.12	+ 0.4	17	13,590	n.	60	n.	22	10	4	15	6.3	56.4	1890	41.2	1885
Kitty Hawk	9	16	30.08	30.09	.....	42.7	+ 2.8	64	15	48	21	13	37	29	36	79	3.66	+ 0.4	13	14,017	n.	60	n.	22	7	15	17	6.7	53.2	1890	37.7	1875
Raleigh	388	6	30.72	30.15	.....	43.8	.....	68	2	53	17	13	35	36	34	76	3.59	.....	12	6,255	n.	29	nw.	12	7	10	12	6.1	52.7	1890	32.2	1889
Southport	34	17	30.08	30.11	.....	47.0	+ 2.3	64	11	53	22	13	41	36	43	88	2.96	- 0.1	15	7,170	n.	33	nw.	12	9	7	13	6.2	56.2	1890	42.5	1885
Wilmington	78	22	30.04	30.13	- .01	48.2	+ 2.5	69	15	56	22	13	40	34	40	80	3.65	+ 0.2	13	7,308	n.	42	nw.	12	5	10	14	6.7	58.4	1890	44.4	.....
Charleston	52	22	30.09	30.14	- .01	53.0	+ 0.7	73	15	61	32	13	45	35	43	77	1.54	- 2.0	10	6,795	sw.	28	nw.	12	9	11	9	5.7	60.6	1890	47.4	1889
Columbia	5	.....	.....	.....	.....	49.7	.....	69	2	61	3	13	38	35	.....	.....	4.41	.....	10	.....	nw.	.....	.....	19	3	7	.....	57.6	1890	44.0	1889	
Augusta	209	21	30.94	30.18	+ .01	51.0	+ 1.0	70	15	60	28	13	42	35	39	72	2.96	- 1.0	8	3,849	ne.	30	w.	11	13	5	11	4.7	58.2	1890	42.7	1885
Savannah	87	22	30.05	30.13	- .02	54.4	+ 1.4	75	15	63	32	13	46	30	43	76	1.31	- 1.9	9	5,964	n.	30	nw.	12	7	12	10	5.9	61.2	1890	48.0	1889
Jacksonville	43	21	30.10	30.14	- .01	58.0	+ 1.8	78	8	66	36	13	50	30	48	77	0.77	- 2.6	7	5,468	n.	30	sw.	12	7	8	14	6.2	65.6	1891	52.4	1889
Florida Peninsula.																																
Jupiter	28	5	30.08	30.11	.....	66.0	.....	86	9	74	40	13	58	25	60	87	2.70	.....	6	6,958	nw.	36	ne.	17	10	17	2	4.5	71.6	1891	64.8	1889
Key West	32	23	30.10	30.12	.....	69.9	+ 1.9	81	10	74	56	13	66	25	61	75	1.71	- 0.1	4	7,837	n.	38	nw.	12	10	13	6	4.2	75.0	1883	66.0	1886
Mico	4	.....	.....	.....	.....	62.1	.....	83	15	70	39	13	54	25	.....	.....	2.97	.....	9	.....	n.	.....	.....	84	11	4	.....	69.6	1891	60.3	1889	
Tampa	36	.....	.....	.....	.....	63.0	.....	79	7	72	42	13	54	28	54	82	1.13	.....	8	3,034	ne.	22	nw.	12	8	13	8	5.6	.....	.....	.....
Titusville	44	5	30.09	30.13	.....	62.3	.....	83	9	69	42	13	56	28	53	84	2.09	.....	10	7,280	n.	36	n.	22	11	12	12	6.4	68.6	1891	57.0	1889
Eastern Gulf States.																																
Atlanta	1,131	14	30.05	30.17	- .01	47.8	+ 0.0	65	5	56	26	13	40	29	39	79	3.44	- 1.7	11	7,516	e.	48	nw.	12	14	7	8	4.7	54.8	1890	39.5	1885
Pensacola	56	13	30.06	30.12	- .04	58.9	+ 1.7	75	15	66	40	12	52	33	51	83	0.53	- 3.6	3	6,591	ne.	30	nw.	12	13	7	9	4.7	63.3	1887	50.7	1885
Auburn	.....	11	.....	.....	.....	47.6	.....	70	7	60	22	13	35	34	.....	.....	3.72	.....	8	.....	e.	.....	.....	9	12	8	.....	58.2	1890	42.7	1885	
Mobile	35	22	30.07	30.11	- .04	56.8	+ 1.3	74	3	65	37	1	49	29	49	84	3.09	- 2.8	5	5,240	n.	34	n.	12	7	12	10	5.4	62.5	1887	45.3	1885
Montgomery	217	20	30.50	30.14	- .03	54.6	+ 1.1	75	7	64	33	13	45	31	43	75	2.04	- 2.5	9													

Table of miscellaneous meteorological data for February, 1892—Weather Bureau observations—Continued.

Districts and stations.	Elevation above sea-level, feet.	Length of record, years.	Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.				Humidity and precipitation.				Wind.				Mean temperature data since opening of station.														
			Mean pressure, 8 a. m. and 8 p. m. + 2.	Mean reduced.	Departure from normal.	Mean max. and min. + 2.	Departure from normal.	Maximum.	Minimum.	Greatest daily range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.	Days with or more.	Total movement, miles.	Prevailing direction.	Maximum velocity.		Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Highest for month.	Year.	Lowest for month.	Year.				
																		Miles per hour.	Direction.												
Ex. Northwest—Con-																															
Fort Buford	1,899	14	27.99	30.16	-.01	13.2 + 4.3	45	12	24	14	2	43	6	80	0.38	-0.1	9	5,000	no.	40	W.	12	8	9	12	6.0	21.4	1882	-5.0	1887	
Upper Miss. Valley.																															
Minneapolis	758	22	29.29	30.16	-.05	32.0 + 4.8	48	26	30	17	15	16	26	15	75	1.37	0.0	11	5,586	no.	27	W.	12	8	9	16	6.7	.....	.....	.....	.....
Red Wing	850	22	29.20	30.17	+.05	20.8 + 5.4	46	25	26	16	15	17	31	15	75	1.44	0.5	10	5,354	no.	24	W.	13	7	16	16	6.8	31.8	1877	-2.1	1875
Saint Paul	720	20	29.33	30.15	-.07	25.9 + 7.3	48	26	33	12	15	19	34	20	79	1.87	0.0	10	5,663	no.	26	NW.	10	4	9	16	7.3	37.3	1878	6.3	1875
La Crosse	613	21	29.40	30.15	-.04	31.0 + 6.4	53	13	37	1	15	25	40	25	83	1.35	0.4	14	7,182	no.	31	NW.	14	6	18	18	7.3	40.3	1882	10.1	1875
Davenport	869	14	29.17	30.12	-.01	29.0 + 6.2	50	17	35	1	15	23	27	23	84	1.35	0.0	9	5,858	no.	24	W.	10	3	8	18	7.6	36.0	1882	14.6	1885
Des Moines	651	19	29.40	30.14	-.04	28.6 + 6.3	51	25	34	5	15	23	30	22	79	1.02	0.6	7	5,988	no.	22	NW.	14	5	7	17	7.3	35.7	1882	6.1	1875
Dubuque	613	21	29.44	30.12	-.01	33.5 + 5.4	57	1	40	5	15	27	33	27	80	1.61	0.3	12	5,260	no.	26	W.	7	7	6	16	6.4	39.5	1882	16.5	1885
Keokuk	359	21	29.73	30.12	-.06	44.6 + 5.3	67	24	52	24	12	37	29	35	76	3.31	1.0	12	5,573	no.	38	SW.	7	5	10	14	6.7	49.0	1882	31.9	1885
Cairo	644	13	29.40	30.11	-.02	34.8 + 3.6	62	1	47	7	14	28	35	29	83	3.41	1.4	13	6,726	no.	36	SW.	7	4	9	17	7.2	42.2	1882	20.9	1885
Springfield, Ill.	571	22	29.49	30.11	-.02	40.0 + 4.9	68	1	47	20	15	33	33	33	79	4.86	1.8	14	8,624	no.	42	W.	10	9	13	13	6.0	43.9	1882	26.0	1875
Missouri Valley.																															
Saint Louis	571	22	29.49	30.11	-.02	40.0 + 4.9	68	1	47	20	15	33	33	33	79	4.86	1.8	14	8,624	no.	42	W.	10	9	13	13	6.0	43.9	1882	26.0	1875
Columbia Valley.																															
Columbia	963	4	29.06	30.13	-.03	39.6 + 4.1	66	1	48	22	11	30	30	30	80	4.27	0.3	17	7,346	no.	35	NW.	14	6	8	15	6.6	36.8	1892	28.5	1889
Kansas City	1,356	7	28.63	30.10	-.03	41.0 + 4.1	66	1	48	22	11	30	30	30	80	4.27	0.3	17	7,346	no.	35	NW.	14	6	8	15	6.6	36.8	1892	28.5	1889
Springfield, Mo.	857	21	29.19	30.15	+.01	36.4 + 5.9	61	13	44	12	15	25	33	27	74	3.65	2.1	9	6,287	no.	36	NW.	10	6	10	16	7.3	42.0	1882	20.5	1875
Leavenworth	857	21	29.19	30.15	+.01	36.4 + 5.9	61	13	44	12	15	25	33	27	74	3.65	2.1	9	6,287	no.	36	NW.	10	6	10	16	7.3	42.0	1882	20.5	1875
Topeka	1,113	22	28.93	30.15	-.02	39.6 + 5.5	54	17	36	3	15	23	27	24	83	1.54	0.2	8	5,534	no.	28	NW.	10	4	9	16	7.3	37.3	1877	13.4	1875
Omaha	1,113	22	28.93	30.15	-.02	39.6 + 5.5	54	17	36	3	15	23	27	24	83	1.54	0.2	8	5,534	no.	28	NW.	10	4	9	16	7.3	37.3	1877	13.4	1875
Crete	2,613	7	27.30	30.17	-.00	26.2 + 3.3	66	22	38	4	15	14	45	17	77	0.47	0.1	6	6,355	no.	43	NW.	10	12	7	9	4.9	27.7	1888	12.6	1891
Valentine	1,158	7	27.30	30.17	-.00	26.2 + 3.3	66	22	38	4	15	14	45	17	77	0.47	0.1	6	6,355	no.	43	NW.	10	12	7	9	4.9	27.7	1888	12.6	1891
Sioux City	1,470	7	27.30	30.17	-.00	26.2 + 3.3	66	22	38	4	15	14	45	17	77	0.47	0.1	6	6,355	no.	43	NW.	10	12	7	9	4.9	27.7	1888	12.6	1891
Pierre	1,310	11	28.68	30.18	+.01	17.4 + 4.3	48	24	27	18	15	8	36	12	84	0.70	0.2	6	6,747	no.	36	NW.	10	7	10	12	6.1	24.7	1882	3.6	1887
Huron	1,310	11	28.68	30.18	+.01	17.4 + 4.3	48	24	27	18	15	8	36	12	84	0.70	0.2	6	6,747	no.	36	NW.	10	7	10	12	6.1	24.7	1882	3.6	1887
Yankton	1,310	11	28.68	30.18	+.01	17.4 + 4.3	48	24	27	18	15	8	36	12	84	0.70	0.2	6	6,747	no.	36	NW.	10	7	10	12	6.1	24.7	1882	3.6	1887
Northern Slope.																															
Fort Assinaboine	2,690	12	27.11	30.03	-.13	21.8 + 6.9	60	12	33	14	18	10	37	14	78	0.33	0.3	8	5,414	no.	57	NW.	10	9	13	7	5.1	30.3	1886	-2.6	1887
Miles City	2,374	7	27.47	30.11	-.09	32.4 + 10.0	54	12	41	12	7	25	34	25	79	1.01	0.5	10	6,939	no.	23	NW.	12	7	11	11	5.8	35.0	1888	5.0	1887
Helena	4,118	12	25.72	30.05	-.09	32.4 + 10.0	54	12	41	12	7	25	34	25	79	1.01	0.5	10	6,939	no.	23	NW.	12	7	11	11	5.8	35.0	1888	5.0	1887
Rapid City	3,280	7	26.59	30.14	-.03	24.2 + 2.2	60	12	35	5	15	24	32	17	80	0.17	0.5	9	5,397	no.	46	NW.	10	10	11	11	5.0	30.3	1888	16.4	1887
Cheyenne	6,105	21	23.93	30.05	-.12	30.4 + 3.0	54	20	39	9	8	22	27	19	69	1.17	0.8	5	5,545	no.	44	W.	9	10	15	4	4.6	33.4	1886	15.9	1887
Lander	5,377	7	24.56	30.16	-.01	26.0 + 0.1	51	26	36	5	9	16	33	18	78	0.97	0.6	5	5,226	no.	27	NW.	10	8	12	9	5.3	35.3	1878	16.8	1883
North Platte	2,841	18	27.10	30.16	-.01	34.1 + 2.7	73	18	60	29	15	42	31	39	72	1.04	0.1	5	8,023	no.	54	SW.	13	6	16	7	5.2	51.4	1890	45.9	1889
Middle Slope.																															
Denver	5,287	21	24.69	30.16	-.00	33.5 + 0.5	63	12	44	3	8	23	39	18	61	0.75	0.2	6	3,668	no.	34	NW.	10	11	14	4	4.4	38.6	.....	22.0	1883
Pueblo	4,734	4	25.21	30.11	-.04	35.8 + 0.0	64	17	50	10	9	23	44	16	55	0.98	0.3	1	5,171	no.	44	NW.	10	11	14	4	4.2	35.8	1892	31.2	1889
Concordia	1,410	7	26.61	30.18	-.00	34.0 + 5.1	59	25	43	12	7	25	34	25	79	1.01	0.5	10	6,939	no.	23	NW.	12	7	10	10	5.3	34.0	1892	24.3	1887
Dodge City	2,523	18	27.42	30.15	-.01	34.7 + 2.4	63	17	45	12	7	25	34	25	79	1.01	0.5	10	6,939	no.	23	NW.	12	7	10	10	5.3	34.0	1892	24.3	1887
Wichita	1,366	4	28.63	30.13	-.03	38.5 + 0.0	66	17	47	19	14	30	36	30	78	2.22	.....	10	5,943	no.	30	NW.	12	7	11	11	5.6	38.5	1892	31.5	1889
Oklahoma City	1,239	.....	28.79	30.14	.....	44.2 + 1.4	74	4	54	22	15	34	34	33	74	0.70	0.2	10	5,879	no.	30	NW.	12	7	11	11	5.6	38.5	1892	31.5	1889
Southern Slope.																															
Abilene	1,748	7	28.25	30.10	-.03	50.8 + 2.7	73	18	60	29	15	42	31	39	72	1.04	0.1	5	8,023	no.	54	SW.	13	6	16	7	5.2	51.4	1890	45.9	1889
Amarillo	3,691	.....	26.25	30.11	.....	41.9 + 0.0	67	23	54	19	15	30	38	27	69	0.57															

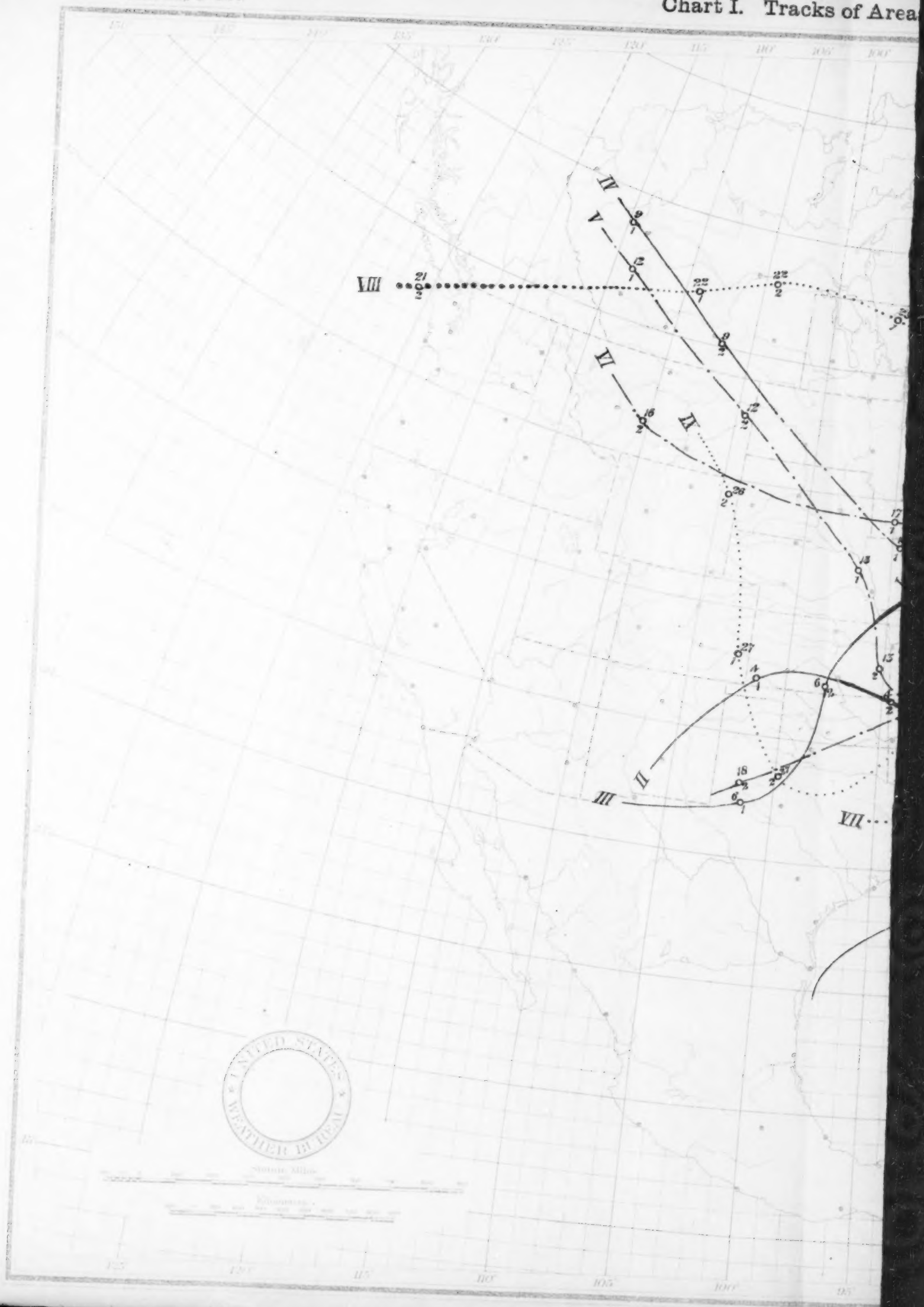
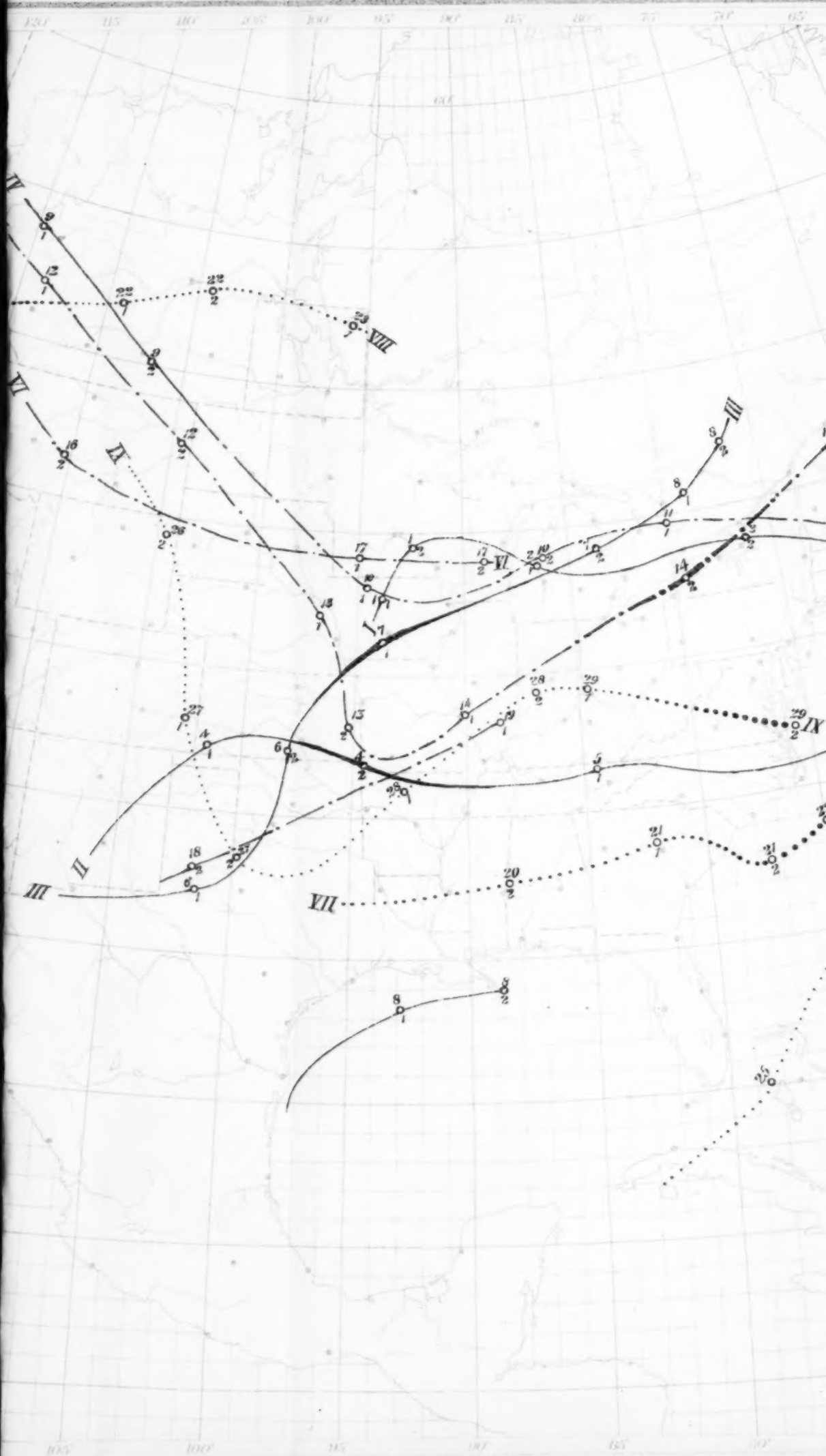


Chart I. Tracks of Areas of Low Pressure. February, 1892.



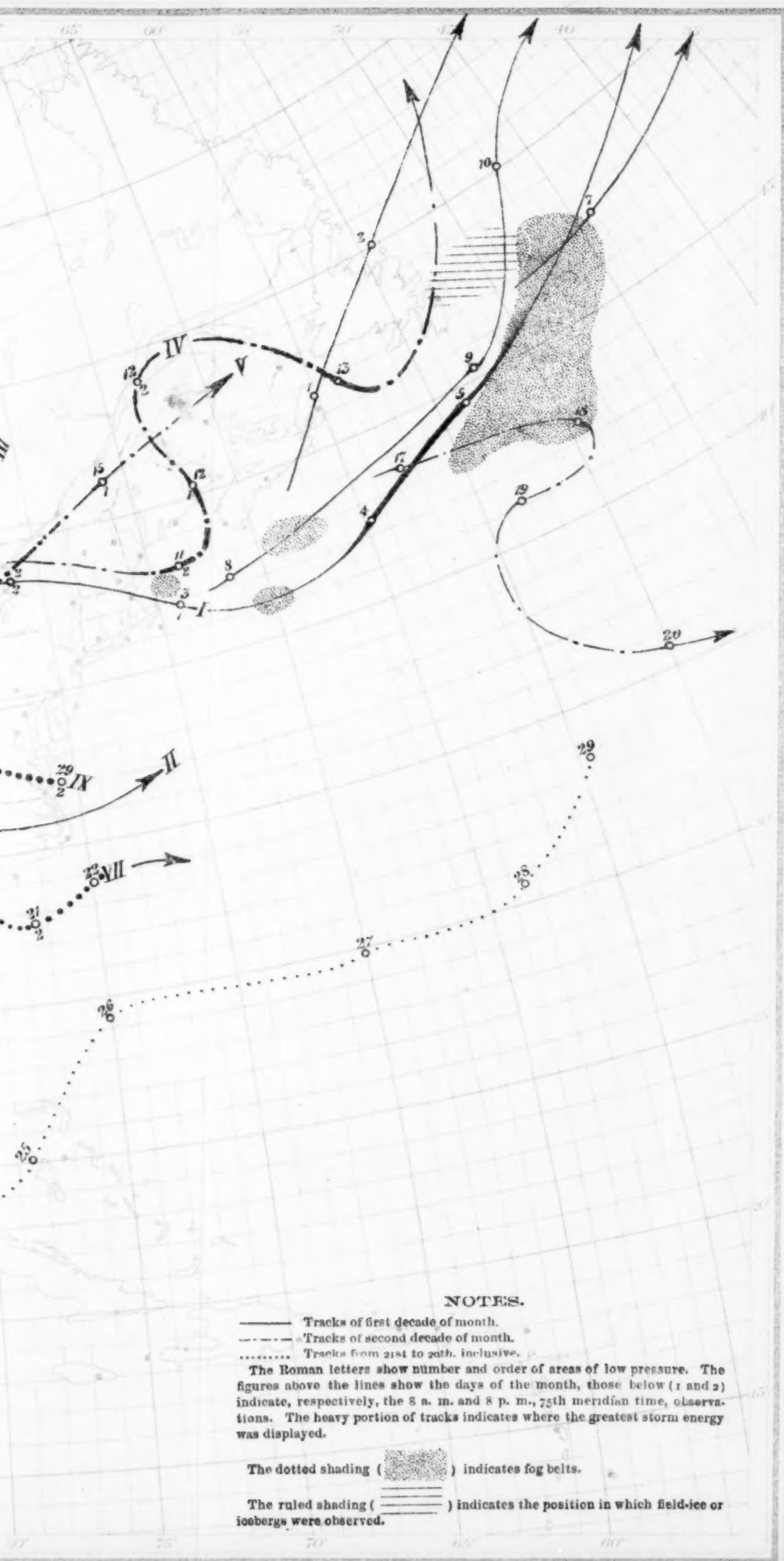




Chart II. Isobars, Isotherms, and Winds, February, 1892.

Form 1061

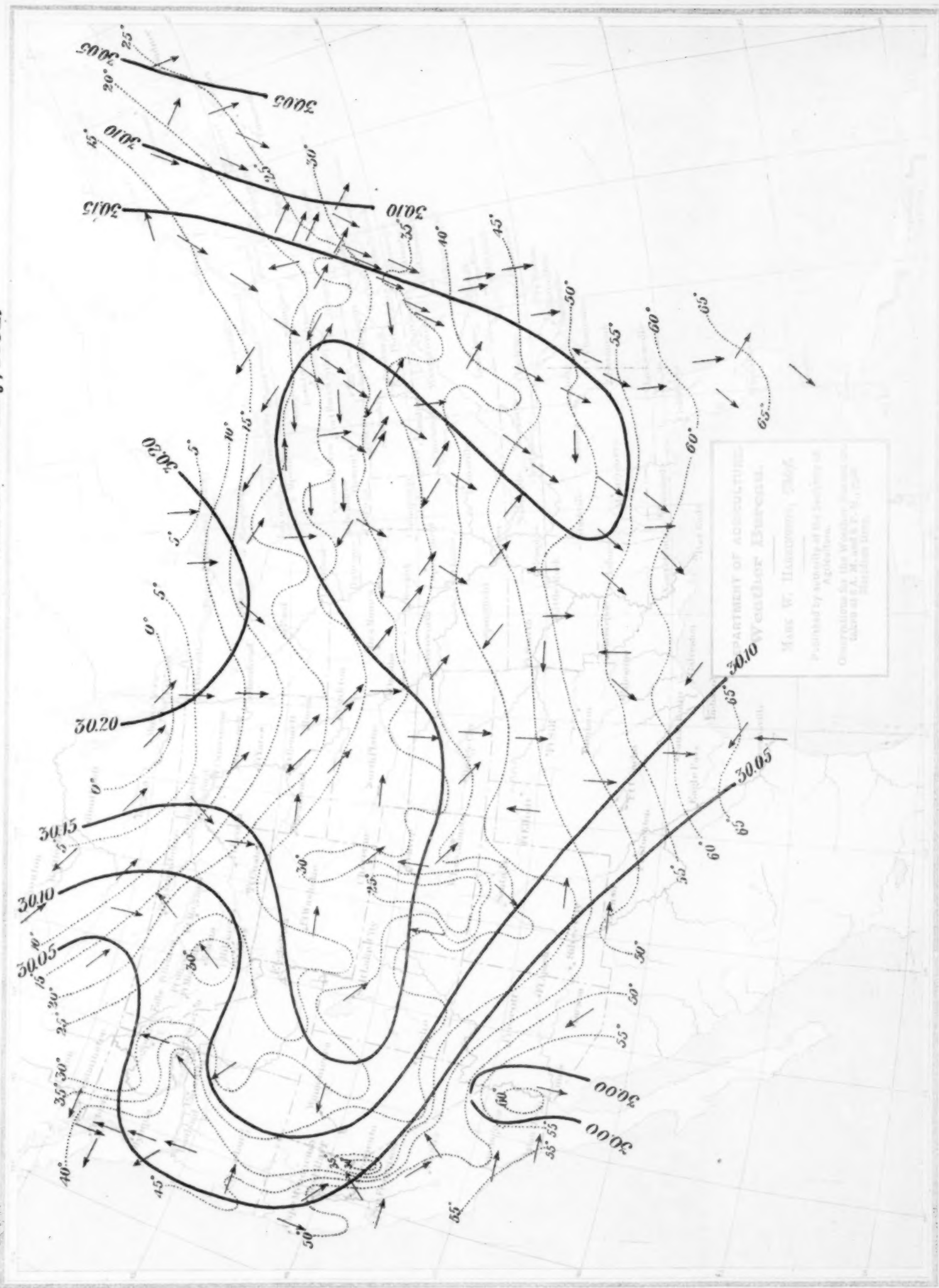




Chart III, Precipitation, February, 1892.

Form 106 F



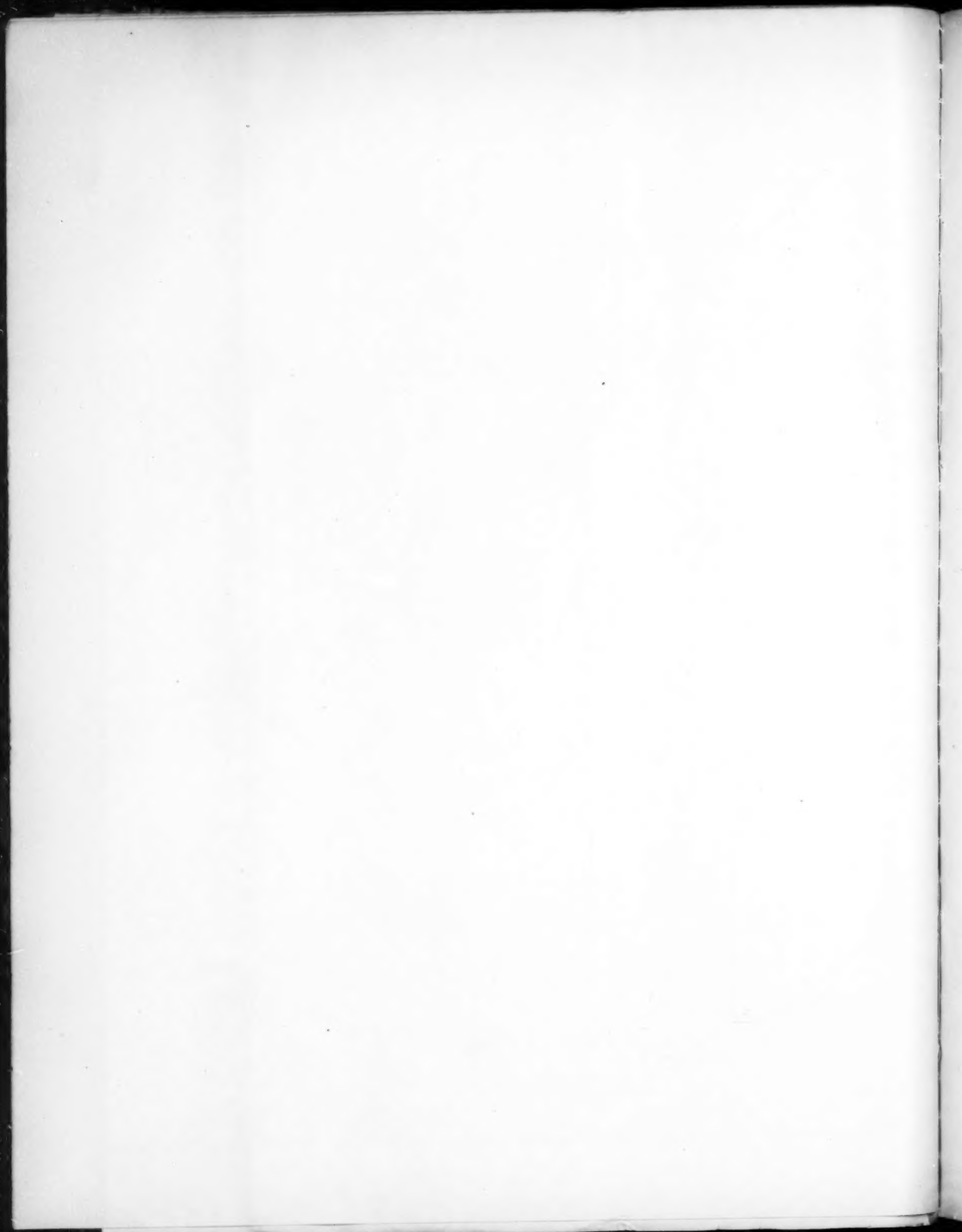
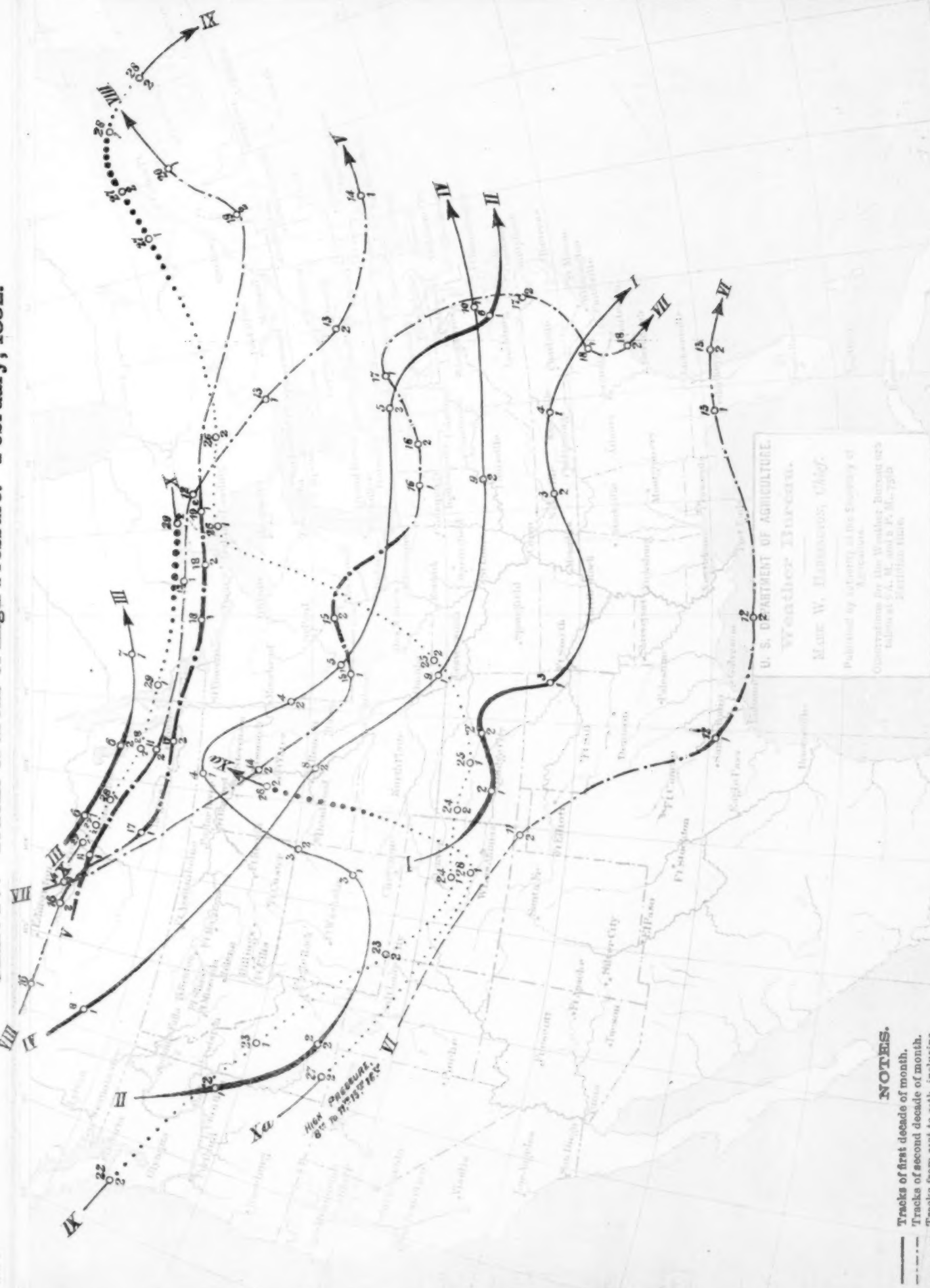


Chart IV. Tracks of areas of High Pressure. February, 1892.

Form 101 F



NOTES.

- Tracks of first decade of month.
- - - Tracks of second decade of month.
- Tracks from 21st to 29th, inclusive.

The heavy portion of tracks indicates where the highest pressure was observed.

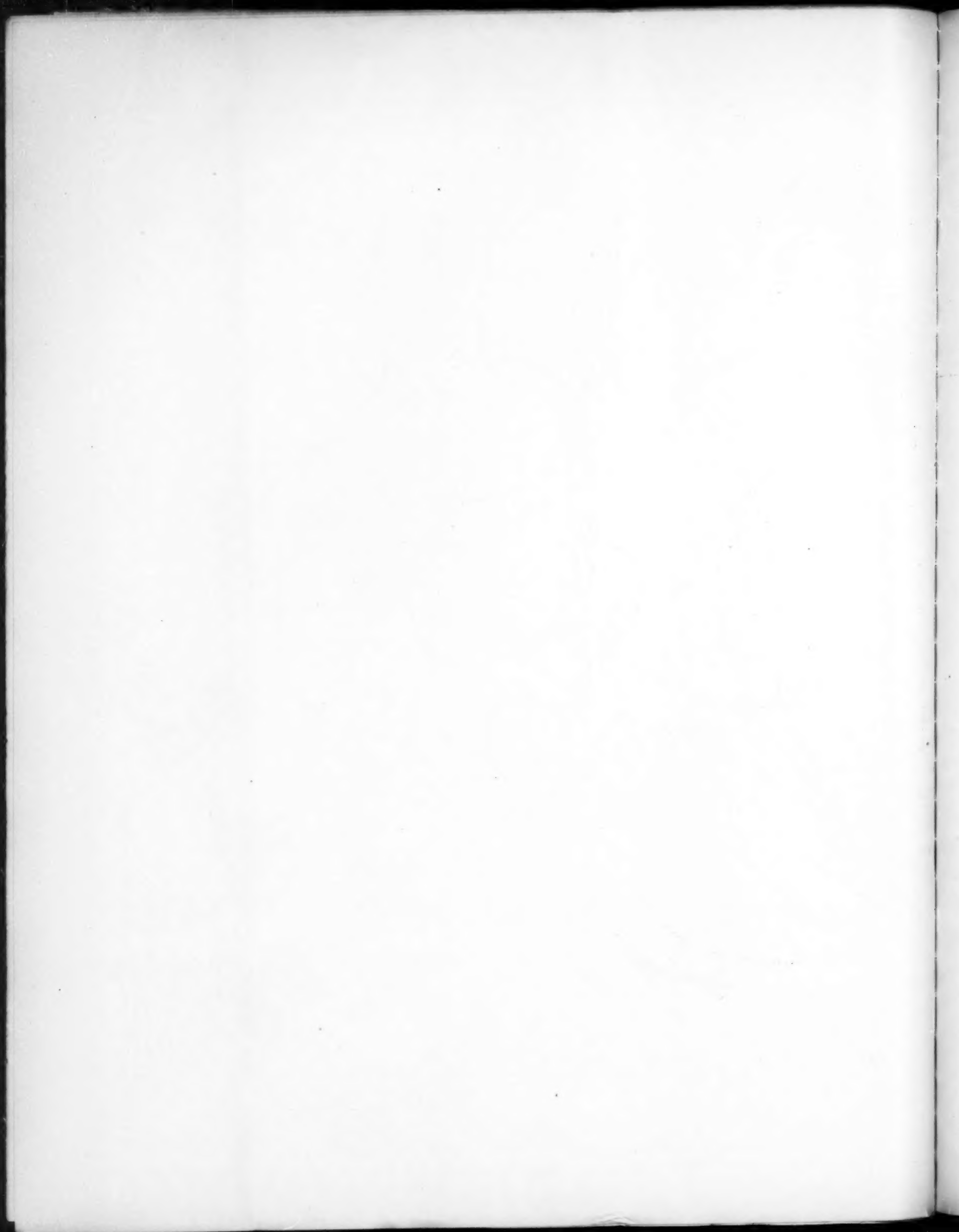


Chart V. Depth of Snowfall (inches) during February, 1892, and Limits of Freezing Weather.



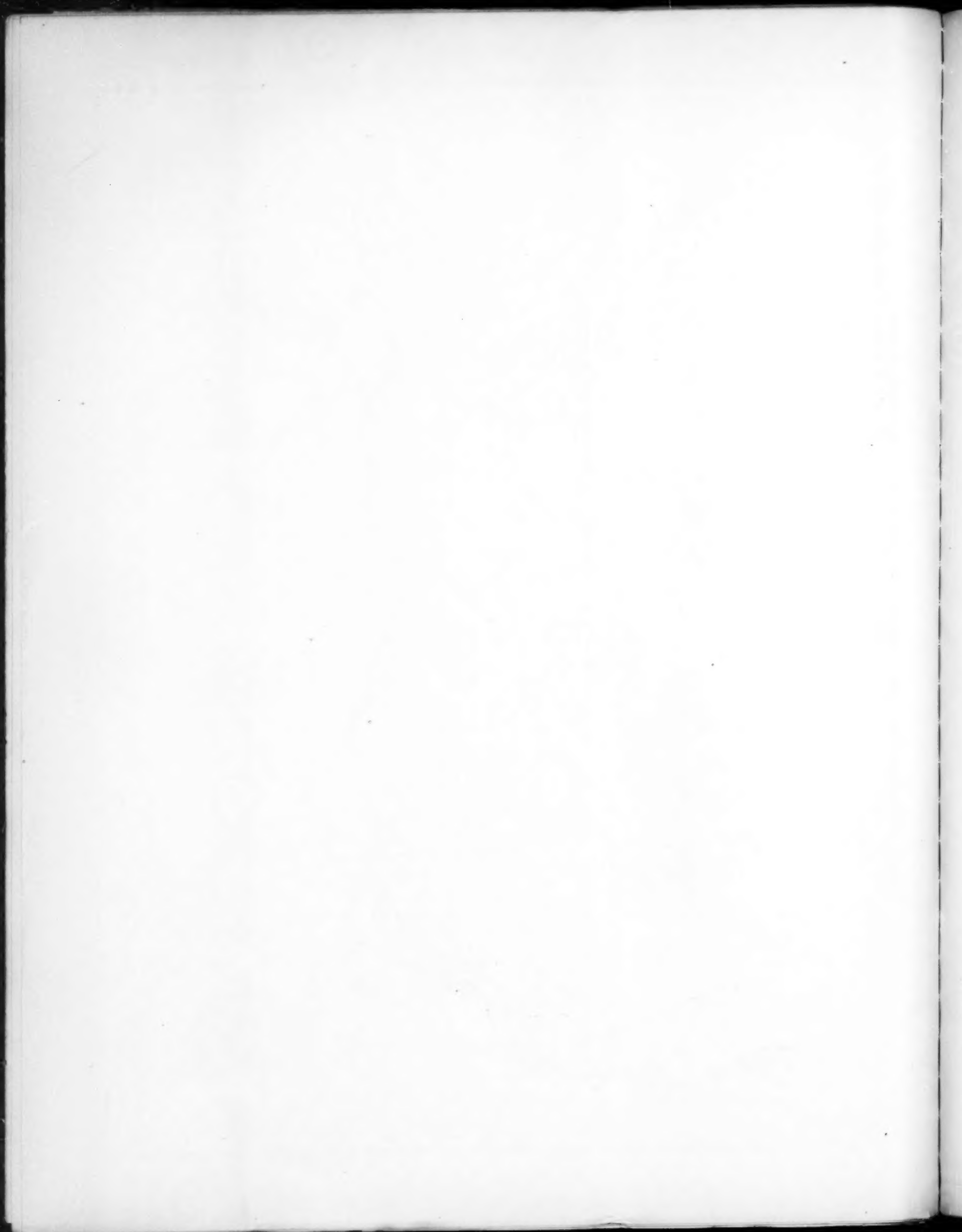


Chart VI. Depth of Snow (inches) reported on ground February 29, 1892.





